patent no. US 6,652,119 B1

# MiT8

type: F1

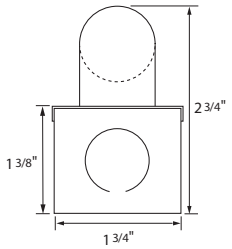
## LINEAR T8 FLUORESCENT

low profile T8 fluorescent fixture

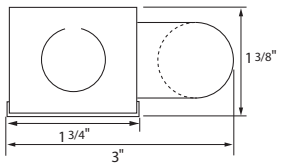
**SPECIFICATIONS |**

- Fully assembled housing is formed and welded, 20 ga. steel, chemically treated to resist corrosion and enhance paint adhesion
- Standard finish is high reflectance white powder coat, applied post production
- Knock-outs accept standard electrical fittings (by others)
- Rotational locking lamp holders
- Available for one or two T8 17W, 25W, 32W or 40W linear fluorescent lamps
- Standard Universal voltage electronic high power factor ballast is pre-wired to the lamp holders
- Dimming and emergency battery back up options available (consult factory for availability and system compatibility)
- UL and ULC listed for dry and damp locations
- IBEW

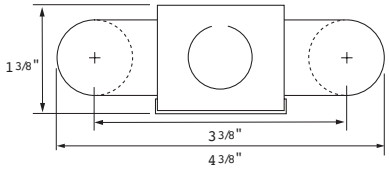
**1T**




**1S**




**2S**

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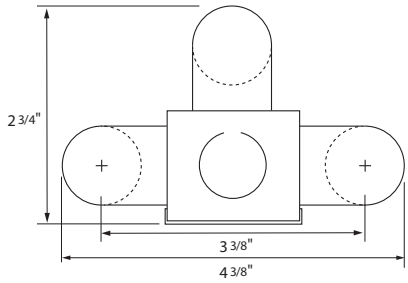


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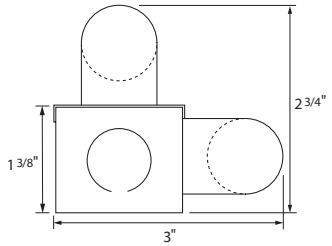


| SPECIFICATION / ORDER FORMAT | | | | | DIMENSIONAL INFO. |
|---|---|---|---|---|---|
| model no. | lamp position | wattage - lamp | voltage | options | overall length |
| MiT8 | -1T | 17 - 17w T8 | /UNV | Dimming - (consult factory) | 24" |
| | -1S | 25 - 25w T8 | | /EB - emergency ballast (consult factory) | 36" |
| | -2S | 32 - 32w T8 | | /DL - damp location | 48" |
| | -3S | 40 - 40w T8 | | /CU - custom finish (consult factory) | 60" |
| | -RA | | | | |





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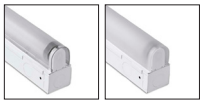
**LENSES** | Two-piece system comprised of polycarbonate channel and striated snap-on cover



| | | |
|---|---|---|
| U8LNP | Clear fine prismatic acrylic lens with mounting clips (sold by the foot) | ___ft. |
| U8LNCF | Frosted acrylic lens with mounting clips (sold by the foot) | ___ft. |

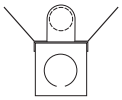
**TUBE GUARD** |

| | | |
|---|---|---|
| TG | Tube Guard (sold by the foot) | ___ft. |

**CABLE KIT** |

| | |
|---|---|
| BAC-4N-W | Aircraft suspension kit, 4', white |
| BAC-4P-W | Aircraft suspension kit w/ power feed, 4', white |

**REFLECTORS** | 20 ga. steel construction, white powder coat finish (consult factory for optional reflector materials and finishes)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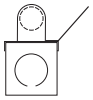
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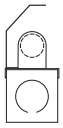
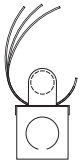

R3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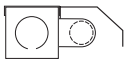
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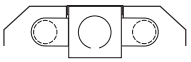
R5

| SYMMETRICAL | for fixture model |
|---|---|
| MiT8-1T-R1-17 | MiT8-1T17 |
| MiT8-1T-R1-25 | MiT8-1T25 |
| MiT8-1T-R1-32 | MiT8-1T32 |
| MiT8-1T-R1-40 | MiT8-1T40 |
| **ASYMMETRICAL** | |
| MiT8-1T-R2-17 | MiT8-1T17 |
| MiT8-1T-R2-25 | MiT8-1T25 |
| MiT8-1T-R2-32 | MiT8-1T32 |
| MiT8-1T-R2-40 | MiT8-1T40 |
| **INSIDE ASYMMETRICAL** | |
| MiT8-1T-R3-17 | MiT8-1T17 |
| MiT8-1T-R3-25 | MiT8-1T25 |
| MiT8-1T-R3-32 | MiT8-1T32 |
| MiT8-1T-R3-40 | MiT8-1T40 |
| **ELLIPTICAL** | |
| MiT8-1T-RE-17 | MiT5-1T17 |
| MiT8-1T-RE-25 | MiT5-1T25 |
| MiT8-1T-RE-32 | MiT5-1T32 |
| MiT8-1T-RE-40 | MiT5-1T40 |
| MiT8-1S-R4-17 | MiT8-1S17 |
| MiT8-1S-R4-25 | MiT8-1S25 |
| MiT8-1S-R4-32 | MiT8-1S32 |
| MiT8-1S-R4-40 | MiT8-1S40 |
| MiT8-2S-R5-17 | MiT8-2S17 |
| MiT8-2S-R5-25 | MiT8-2S25 |
| MiT8-2S-R5-32 | MiT8-2S32 |
| MiT8-2S-R5-40 | MiT8-2S40 |





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# BFL257

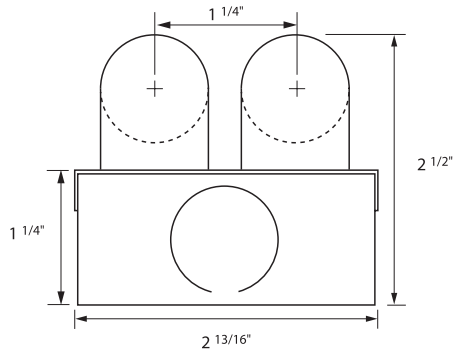
type:

## LINEAR T8 FLUORESCENT

low profile two lamp T8 fluorescent fixture

**SPECIFICATIONS |**

- Fully assembled housing is formed and welded, 20 ga. steel, chemically treated to resist corrosion and enhance paint adhesion
- Standard finish is high reflectance white powder coat, applied post production
- Knock-outs accept standard electrical fittings (by others)
- Available for T8 13W, 14W, 15W, 17W, 25W, 32W or 40W linear fluorescent lamps
- Standard 120V, 277V or Universal electronic high power factor ballast is pre-wired to the lamp holders
- Dimming and emergency battery back up options available **(consult factory for availability and system compatibility)**
- UL and ULC listed for dry and damp locations
- IBEW manufactured and labeled
- Made in the U.S.A.






| SPECIFICATION / ORDER FORMAT | | | DIMENSIONAL INFO. | |
|---|---|---|---|---|
| model no. | voltage | options | lamp | overall length |
| BFL257-13 | /120 | Dimming - (consult factory) | 2 x 13w T8 | 12" |
| BFL257-14 | /277 | /EB - emergency ballast (consult factory) | 2 x 14w T8 | 15" |
| BFL257-15 | | /DL - damp location | 2 x 15w T8 | 18" |
| | | /CU - custom finish (consult factory) | | |
| BFL257-17 | /UNV | | 2 x 17w T8 | 24" |
| BFL257-25 | | | 2 x 25w T8 | 36" |
| BFL257-32 | | | 2 x 32w T8 | 48" |
| BFL257-40 | | | 2 x 40w T8 | 60" |



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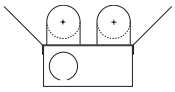
**TUBE GUARD** |

| | | |
|---|---|---|
| | TG | Tube Guard (sold by the foot) ___ft.<br>**NOTE: Two tubes required per fixture** |

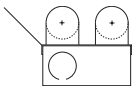
**CABLE KIT** |

| | |
|---|---|
| BAC-4N-W | Aircraft suspension kit, 4', white |
| BAC-4P-W | Aircraft suspension kit w/ power feed, 4', white |

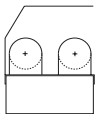
**REFLECTORS** | 20 ga. steel construction, white powder coat finish (consult factory for optional reflector materials and finishes)


R1

| SYMMETRICAL | for fixture models |
|---|---|
| 257-R1-13 | BFL257-13 |
| 257-R1-14 | BFL257-14 |
| 257-R1-15 | BFL257-15 |
| 257-R1-17 | BFL257-17 |
| 257-R1-25 | BFL257-25 |
| 257-R1-32 | BFL257-32 |
| 257-R1-40 | BFL257-40 |


R2

| ASYMMETRICAL | |
|---|---|
| 257-R2-13 | BFL257-13 |
| 257-R2-14 | BFL257-14 |
| 257-R2-15 | BFL257-15 |
| 257-R2-17 | BFL257-17 |
| 257-R2-25 | BFL257-25 |
| 257-R2-32 | BFL257-32 |
| 257-R2-40 | BFL257-40 |


R3

| INSIDE ASYMMETRICAL | |
|---|---|
| 257-R3-13 | BFL257-13 |
| 257-R3-14 | BFL257-14 |
| 257-R3-15 | BFL257-15 |
| 257-R3-17 | BFL257-17 |
| 257-R3-25 | BFL257-25 |
| 257-R3-32 | BFL257-32 |
| 257-R3-40 | BFL257-40 |





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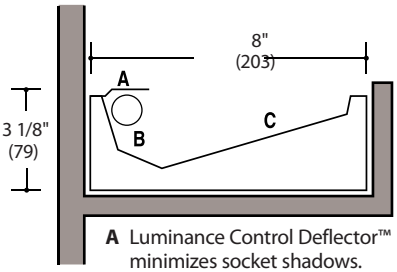
LITECONTROL

Fixture Type:
Project Name:

F3




**A** Luminance Control Deflector™ minimizes socket shadows.

**B** High reflectance aluminum reflector section for maximum horizontal light projection.

**C** High-reflectance white reflector section for efficient indirect distribution.

# Cove-30

## CC-AI-3000

Mounting and Distribution

## Product Description

Concealed Cove steel fixture with excellent asymmetric distribution for effective perimeter lighting within an architectural cove. cULus Listed.

## Ordering Guide

**Product, lamping, & length**

| CC - | AI - | 30 | | | |
|---|---|---|---|---|---|
| Mounting | Distribution | Series | Lamp Count | Nominal Length(ft) | Lamp Type |
| **CC** Concealed Cove | **AI** Asymmetric indirect | **30** | 1* 2 → | 2 → | **T8** |
| | | | 1* 2 → | 3 → | **T5HO** |
| | | | 1* 2 → | 4 → | **T5** |
| | | | 2, 4 → | 6 → | |
| | | | 2, 4 → | 8 → | |
| | | | 1 → | 2 → | **BX40** |
| | | | 2 → | 4 → | **BX50** |
| | | | 4 → | 8 → | |
| | | | 2 → | 3 → | **BX39** |
| | | | 4 → | 6 → | |
| | | | see **notes** | | |

**Options**

| CWM - | | | | | |
|---|---|---|---|---|---|
| Finish | Ballast Options | Tandem Wiring | Circuiting | Other Options | Volts |
| **CWM** (matte white) is standard | **ELB** is std. for T8 or BX **ELB/PS** is std. for T5 or T5HO **DIM** see **Ballast Options** | -- → | **1CWQ** | **AMA** | |
| | | **TW** → see **notes** | **2CWQ** | **F** **EF** **WKC/WP** see **Other Options** | **120** **277** |

**notes:**

Lamp count = total number of lamps in the fixture

* For applications using 1-lamp in cross-section T5 or T5HO see Cove-25.

Tandem wiring not available for one-lamp cross-section fixtures

**For ordering guide information in shaded areas, choose selection by reading ACROSS the shaded areas for correct specifications.**

**CC-AI-3024T8-CWM-ELB-TW-2CWQ-F-120** is a typical catalog number for a 2-lamp (2 lamps in cross-section), 4-foot long T8 fixture, matte white finish, electronic ballast, tandem-wired, pre-wired with two circuits, fuse, 120 volts.

**Cross-section lamping**

**1-T8** **2-T8** **2-T5 or T5HO** **1-BX39,40 or 50**

## Ballast Options

Specify in place of **ELB** or **ELB/PS:**

**DIM** Dimming options are available. Please contact factory and provide make and model of requested dimming ballast to confirm fit and compatibility with the specified lamp configuration.

## Other Options

**AMA** Adjustable Mounting Angle. Quick-attach component to tilt housing either **5°** or **10°**.

**F** Fuse. Slow or fast blow, determined by Litecontrol.

**EF** Emergency Fluorescent Ballast. Battery-powered ballast from a listed manufacturer will operate one T5 or T5HO lamp for 1 1/2 hours.

**WKC/WP** Corner Wiring Kit. With quick-connects.

**Questions to Ask**

**1.** Row information, including desired fixture lengths?
**2.** Lamp type? **3.** Ballast options? **4.** Other options? **5.** 120 or 277 volt?

## Specifications

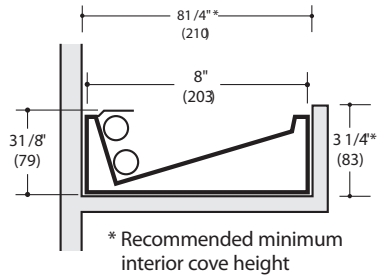
**HOUSING.** Die-formed steel. Ends provided with a 7/8" hole to accommodate pre-wiring.
**REFLECTORS.** Die-formed steel, finished in high-reflectance white, precisely shaped for maximum horizontal light projection. Configuration with four reflector surfaces includes a high-reflectance specular aluminum insert. Luminance Control Deflector™ (**LCD**), finished in high-reflectance white, reduces wall brightness directly above fixture and minimizes socket shadows between fixtures.
**LAMPING.** Available in one- and two-lamp T5, T5HO or T8; one-lamp 39-, 40-, or 50-watt twin-tube compact fluorescent cross-sections .
**BALLAST.** Electronic Ballast (**ELB** - for T8 lamping) or (**ELB/PS** - for T5 or T5HO lamping), high power factor, thermally protected Class P, Sound Rated A, manufactured by a UL Listed manufacturer, as available, determined by Litecontrol. Ballasts with a voltage range of 120 to 277 will be used when fixture configuration and ballast availability allow. The minimum number of ballasts will be used.
**TANDEM WIRING.** When selected from Ordering Guide, fixtures wired to switch in-line lamps separately, providing two (two-lamp cross-section fixtures only) levels of light.
**CIRCUITING.** Fixtures are wired such that one end will have factory-installed push-in quick-connects. The other end will be stripped back 1/2" for quick connection in field. For fixtures to accommodate special circuits such as night light and emergency in-field wiring may be required. See Pre-wiring Information online for details.
**BALLAST DISCONNECT.** Fixture supplied with a ballast disconnect device to enable compliance with the NEC.
**MOUNTING.** Fixtures are installed in cove provided by others. See Planning for installation for detailed information.
**CERTIFICATION.** Fixtures are UL Listed for United States and Canada. Fixtures are rated for damp locations. Consult factory for details.
Note: Litecontrol reserves the right to change specifications without notice for product development and improvement.

## Planning for installation

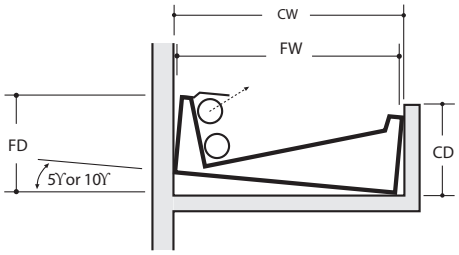
Cove provided by others. Interior cove dimensions should allow for 3 1/8" x 8" fixture cross-section to fit within cove, taking into consideration as-built tolerances. For maximum efficiency, wall and ceiling above cove should have matte surfaces with high reflectances. See design guidelines below. Maximum fixture weight per foot is four pounds.

**Corner Wiring Kit**
Provides the advantages of pre-wiring around corners. Make connections at each end of the flexible whip, push wires into fixtures, then snap onto headers. Specify **WKC/WP** (with push-in quick-connects).

**Adjustable Mounting Angle (AMA) Option**
When room geometry allows, fixture may be tilted, thereby lowering the beam and resulting in a more effective distribution of light into the room. **AMA** (Adjustable Mounting Angle) quick attach component snaps onto housing to raise back of fixture 5° or 10°. Recommended cove sizes are shown.



* Recommended minimum interior cove height




| Angle of Tilt | Ordering Option | Fixture Depth (**FD**) | Fixture Width (**FW**) | Recommended Cove Depth (**CD**) | Recommended Cove Width (**CW**) |
|---|---|---|---|---|---|
| 0 | **(standard)** | 3 1/8" | 8" | 3 1/4" | 8 1/4" |
| 5° | **AMA** | 3 3/4" | 8 1/4" | 3 1/4" | 8 5/8" |
| 10° | **AMA** | 4 1/4" | 8 3/8" | 3 1/4" | 8 5/8" |

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## Design guidelines

For maximum illumination level flexibility, five lamp combinations are available. For a one-lamp T5 or T5HO fixture in a 2 1/16" deep x 6" wide housing refer to Cove-25 (CC-AI-2500).

As the distance from fixture to ceiling is increased, light distribution becomes more uniform. To avoid excessive brightness on ceiling, maximize the distance from the fixture to the ceiling. A fixture with less output ( i.e., one-lamp T8) may be tolerated closer to ceiling than one with higher output. To best evaluate an acceptable mounting position, a mock-up is recommended.

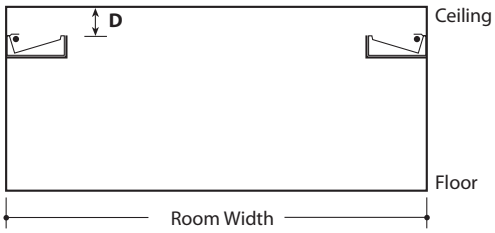
Position fixtures along walls as desired to satisfy visual design goals. To avoid excess corner brightness, stop fixtures 9-15" short of end walls; 0-6" from outside corner.

If using high-output T5 lamps, be advised that lamp lumens per foot for each of the lamp lengths are different. Caution is advised when mixing fixture lengths in rows.

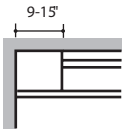
For even lower beam throw and better distribution, consider the Adjustable Mounting Angle (**AMA**) option. This lowers the beam throw by 5° or 10°. Size the cove to hide lamps and fixture. This should only be considered if viewing angles prevent a direct view of the raised portion of the fixture, or if a cut-off angle below horizontal is deemed acceptable.

If the zonal cavity method is used to calculate an average illumination, it is advised in a perimeter layout to derate the illuminance by 10%.

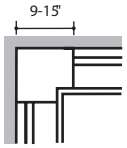
If uniformity of light levels is desired, room width should not exceed the following:
Fixtures along one wall: 6xD
Fixtures on opposite walls: 12xD



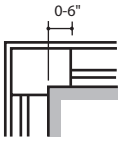

**Single row end clearance**



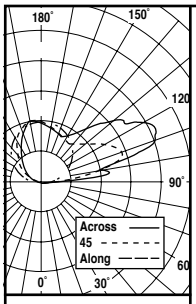

**Inside corner positioning**




**Outside corner positioning**




## Photometric data




1-T5HO

**CANDLEPOWER SUMMARY**
0° PLANE PERPENDICULAR TO LAMPS

| ANGLE | 0 | 45 | 90 | 135 | 180 | OUTPUT LUMENS |
|---|---|---|---|---|---|---|
| 180 | 950 | 950 | 950 | 950 | 950 | |
| 175 | 977 | 964 | 957 | 928 | 923 | 91 |
| 170 | 991 | 976 | 949 | 903 | 890 | |
| 165 | 949 | 976 | 932 | 873 | 854 | 260 |
| 160 | 851 | 933 | 910 | 830 | 820 | |
| 155 | 758 | 854 | 881 | 802 | 816 | 387 |
| 150 | 671 | 768 | 847 | 751 | 898 | |
| 145 | 591 | 687 | 803 | 758 | 1001 | 485 |
| 140 | 510 | 602 | 756 | 805 | 1164 | |
| 135 | 439 | 517 | 698 | 864 | 1365 | 579 |
| 130 | 370 | 441 | 639 | 957 | 1563 | |
| 125 | 304 | 366 | 576 | 1091 | 1657 | 675 |
| 120 | 256 | 301 | 506 | 1217 | 1922 | |
| 115 | 209 | 237 | 431 | 1308 | 2006 | 750 |
| 110 | 169 | 183 | 350 | 1365 | 1913 | |
| 105 | 135 | 135 | 260 | 1246 | 1313 | 614 |
| 100 | 105 | 97 | 164 | 815 | 1020 | |
| 95 | 51 | 66 | 68 | 707 | 908 | 315 |
| 90 | 3 | 3 | 10 | 149 | 212 | |

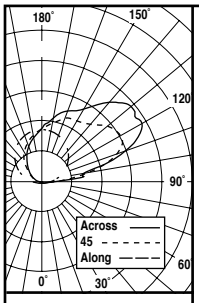
**CC-AI-3014T5HO-LP/ELB 83.0 % Efficiency**
**Litecontrol Certified Test Report #29616000**

| RCC RW | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | .79 | .79 | .79 | .79 | .68 | .68 | .68 | .68 | .46 | .46 | .46 | .26 | .26 | .26 | .08 | .08 | .08 | .00 |
| 1 | .72 | .69 | .66 | .63 | .61 | .59 | .56 | .53 | .40 | .39 | .37 | .23 | .22 | .22 | .07 | .07 | .07 | .00 |
| 2 | .65 | .60 | .55 | .51 | .56 | .51 | .47 | .44 | .35 | .33 | .31 | .20 | .19 | .18 | .06 | .06 | .06 | .00 |
| 3 | .60 | .52 | .47 | .43 | .51 | .45 | .41 | .37 | .31 | .28 | .26 | .18 | .17 | .15 | .06 | .05 | .05 | .00 |
| 4 | .54 | .46 | .40 | .36 | .46 | .40 | .35 | .31 | .27 | .24 | .22 | .16 | .14 | .13 | .05 | .05 | .04 | .00 |
| 5 | .50 | .40 | .35 | .30 | .42 | .35 | .30 | .26 | .24 | .21 | .19 | .14 | .12 | .11 | .04 | .04 | .04 | .00 |
| 6 | .46 | .36 | .30 | .26 | .39 | .31 | .26 | .23 | .22 | .18 | .16 | .13 | .11 | .09 | .04 | .03 | .03 | .00 |
| 7 | .42 | .32 | .26 | .22 | .36 | .28 | .23 | .19 | .19 | .16 | .14 | .11 | .09 | .08 | .04 | .03 | .03 | .00 |
| 8 | .39 | .29 | .23 | .19 | .33 | .25 | .20 | .17 | .17 | .14 | .12 | .10 | .08 | .07 | .03 | .03 | .02 | .00 |
| 9 | .36 | .26 | .21 | .17 | .30 | .23 | .18 | .15 | .16 | .13 | .10 | .09 | .07 | .06 | .03 | .02 | .02 | .00 |
| 10 | .33 | .24 | .18 | .15 | .28 | .21 | .16 | .13 | .14 | .11 | .09 | .08 | .07 | .05 | .03 | .02 | .02 | .00 |

Floor Cavity Reflectance .20

**ZONAL LUMEN SUMMARY**

| ZONE | LUMENS | % LAMP | % LUMINAIRE |
|---|---|---|---|
| 180-90° | 4151 | 83.03 | 100.00 |
| 90-0° | 0 | .00 | .00 |
| 180-0° | 4151 | 83.03 | 100.00 |




2-T5HO

**CANDLEPOWER SUMMARY**
0° PLANE PERPENDICULAR TO LAMPS

| ANGLE | 0 | 45 | 90 | 135 | 180 | OUTPUT LUMENS |
|---|---|---|---|---|---|---|
| 180 | 1682 | 1682 | 1682 | 1682 | 1682 | |
| 175 | 1610 | 1616 | 1684 | 1781 | 1872 | 163 |
| 170 | 1485 | 1545 | 1669 | 1909 | 2080 | |
| 165 | 1345 | 1435 | 1646 | 2048 | 2306 | 494 |
| 160 | 1214 | 1315 | 1601 | 2185 | 2439 | |
| 155 | 1086 | 1210 | 1556 | 2247 | 2537 | 793 |
| 150 | 954 | 1090 | 1496 | 2266 | 2770 | |
| 145 | 846 | 966 | 1422 | 2324 | 3055 | 1062 |
| 140 | 733 | 847 | 1339 | 2454 | 3345 | |
| 135 | 624 | 744 | 1223 | 2623 | 3604 | 1302 |
| 130 | 532 | 626 | 1135 | 2760 | 3762 | |
| 125 | 433 | 520 | 1025 | 2892 | 3636 | 1449 |
| 120 | 365 | 425 | 907 | 2933 | 3671 | |
| 115 | 297 | 338 | 773 | 2818 | 3416 | 1422 |
| 110 | 248 | 263 | 625 | 2559 | 2834 | |
| 105 | 192 | 190 | 465 | 2006 | 1886 | 998 |
| 100 | 154 | 141 | 295 | 1195 | 1297 | |
| 95 | 64 | 98 | 120 | 910 | 1013 | 421 |
| 90 | 8 | 2 | 9 | 186 | 265 | |

**CC-AI-3024T5HO-LP/ELB 81.0 % Efficiency**
**Litecontrol Certified Test Report #29626000**

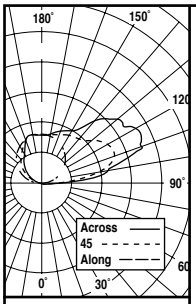
| RCC RW | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | .77 | .77 | .77 | .77 | .66 | .66 | .66 | .66 | .45 | .45 | .45 | .26 | .26 | .26 | .08 | .08 | .08 | .00 |
| 1 | .70 | .67 | .64 | .61 | .60 | .57 | .55 | .52 | .39 | .38 | .37 | .23 | .22 | .21 | .07 | .07 | .07 | .00 |
| 2 | .64 | .58 | .54 | .50 | .54 | .50 | .46 | .43 | .34 | .32 | .30 | .20 | .19 | .18 | .06 | .06 | .06 | .00 |
| 3 | .58 | .51 | .46 | .42 | .49 | .44 | .40 | .36 | .30 | .27 | .25 | .17 | .16 | .15 | .06 | .05 | .05 | .00 |
| 4 | .53 | .45 | .39 | .35 | .45 | .39 | .34 | .30 | .27 | .24 | .21 | .15 | .14 | .13 | .05 | .05 | .04 | .00 |
| 5 | .48 | .39 | .34 | .29 | .41 | .34 | .29 | .26 | .24 | .20 | .18 | .14 | .12 | .11 | .04 | .04 | .04 | .00 |
| 6 | .44 | .35 | .29 | .25 | .38 | .30 | .26 | .22 | .21 | .18 | .16 | .12 | .11 | .09 | .04 | .03 | .03 | .00 |
| 7 | .41 | .32 | .26 | .22 | .35 | .27 | .22 | .19 | .19 | .16 | .13 | .11 | .09 | .08 | .04 | .03 | .03 | .00 |
| 8 | .38 | .29 | .23 | .19 | .32 | .24 | .20 | .16 | .17 | .14 | .12 | .10 | .08 | .07 | .03 | .03 | .02 | .00 |
| 9 | .35 | .26 | .20 | .16 | .30 | .22 | .17 | .14 | .15 | .12 | .10 | .09 | .07 | .06 | .03 | .02 | .02 | .00 |
| 10 | .32 | .23 | .18 | .14 | .28 | .20 | .16 | .13 | .14 | .11 | .09 | .08 | .06 | .05 | .03 | .02 | .02 | .00 |

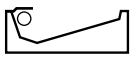
Floor Cavity Reflectance .20

**ZONAL LUMEN SUMMARY**

| ZONE | LUMENS | % LAMP | % LUMINAIRE |
|---|---|---|---|
| 180-90° | 8099 | 81.00 | 100.00 |
| 90-0° | 0 | .00 | .00 |
| 180-0° | 8099 | 81.00 | 100.00 |

## Photometric data



1-T8

**CANDLEPOWER SUMMARY**

0° PLANE PERPENDICULAR TO LAMPS

| ANGLE | 0 | 45 | 90 | 135 | 180 | OUTPUT LUMENS |
|---|---|---|---|---|---|---|
| 180 | 467 | 467 | 467 | 467 | 467 | |
| 175 | 470 | 469 | 467 | 469 | 475 | 45 |
| 170 | 474 | 473 | 463 | 481 | 494 | |
| 165 | 464 | 474 | 454 | 489 | 510 | 135 |
| 160 | 419 | 456 | 442 | 494 | 529 | |
| 155 | 378 | 419 | 430 | 500 | 559 | 212 |
| 150 | 336 | 378 | 408 | 504 | 595 | |
| 145 | 297 | 338 | 392 | 509 | 690 | 276 |
| 140 | 258 | 299 | 367 | 533 | 795 | |
| 135 | 224 | 257 | 339 | 589 | 885 | 340 |
| 130 | 189 | 221 | 309 | 659 | 955 | |
| 125 | 156 | 186 | 278 | 709 | 954 | 386 |
| 120 | 134 | 153 | 243 | 741 | 1048 | |
| 115 | 108 | 120 | 205 | 753 | 1056 | 408 |
| 110 | 89 | 88 | 165 | 744 | 1016 | |
| 105 | 69 | 69 | 125 | 674 | 775 | 337 |
| 100 | 56 | 48 | 80 | 489 | 627 | |
| 95 | 31 | 34 | 36 | 360 | 439 | 171 |
| 90 | 1 | 3 | 4 | 98 | 128 | |

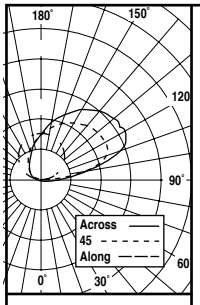
**CC-AI-3014T8-LP/ELB 79.5 % Efficiency**
**Litecontrol Certified Test Report #29611000**

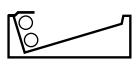
| RCC | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | .76 | .76 | .76 | .76 | .65 | .65 | .65 | .65 | .44 | .44 | .44 | .25 | .25 | .25 | .08 | .08 | .08 | .00 |
| 1 | .69 | .66 | .63 | .60 | .59 | .56 | .54 | .51 | .38 | .37 | .36 | .22 | .21 | .21 | .07 | .07 | .07 | .00 |
| 2 | .62 | .57 | .53 | .49 | .53 | .49 | .45 | .42 | .34 | .31 | .29 | .19 | .18 | .17 | .06 | .06 | .06 | .00 |
| 3 | .57 | .50 | .45 | .41 | .49 | .43 | .39 | .35 | .30 | .27 | .25 | .17 | .16 | .15 | .05 | .05 | .05 | .00 |
| 4 | .52 | .44 | .38 | .34 | .44 | .38 | .33 | .30 | .26 | .23 | .21 | .15 | .14 | .12 | .05 | .04 | .04 | .00 |
| 5 | .48 | .38 | .33 | .29 | .40 | .34 | .29 | .25 | .23 | .20 | .18 | .13 | .12 | .11 | .04 | .04 | .03 | .00 |
| 6 | .44 | .35 | .29 | .25 | .37 | .30 | .25 | .22 | .21 | .18 | .15 | .12 | .10 | .09 | .04 | .03 | .03 | .00 |
| 7 | .40 | .31 | .25 | .21 | .34 | .27 | .22 | .19 | .18 | .15 | .13 | .11 | .09 | .08 | .03 | .03 | .03 | .00 |
| 8 | .37 | .28 | .22 | .18 | .31 | .24 | .19 | .16 | .17 | .14 | .11 | .10 | .08 | .07 | .03 | .03 | .02 | .00 |
| 9 | .34 | .25 | .20 | .16 | .29 | .22 | .17 | .14 | .15 | .12 | .10 | .09 | .07 | .06 | .03 | .02 | .02 | .00 |
| 10 | .32 | .23 | .18 | .14 | .27 | .20 | .15 | .12 | .14 | .11 | .09 | .08 | .06 | .05 | .03 | .02 | .02 | .00 |

Floor Cavity Reflectance .20

**ZONAL LUMEN SUMMARY**

| ZONE | LUMENS | % LAMP | % LUMINAIRE |
|---|---|---|---|
| 180-90° | 2305 | 79.51 | 100.00 |
| 90-0° | 0 | .00 | .00 |
| 180-0° | 2305 | 79.51 | 100.00 |



2-T8

**CANDLEPOWER SUMMARY**

0° PLANE PERPENDICULAR TO LAMPS

| ANGLE | 0 | 45 | 90 | 135 | 180 | OUTPUT LUMENS |
|---|---|---|---|---|---|---|
| 180 | 776 | 776 | 776 | 776 | 776 | |
| 175 | 685 | 711 | 770 | 837 | 879 | 74 |
| 170 | 599 | 648 | 766 | 896 | 970 | |
| 165 | 546 | 588 | 749 | 958 | 1068 | 220 |
| 160 | 493 | 539 | 732 | 1009 | 1168 | |
| 155 | 445 | 491 | 709 | 1058 | 1252 | 360 |
| 150 | 400 | 446 | 678 | 1099 | 1348 | |
| 145 | 353 | 403 | 642 | 1146 | 1424 | 483 |
| 140 | 307 | 356 | 601 | 1182 | 1501 | |
| 135 | 270 | 310 | 554 | 1211 | 1549 | 579 |
| 130 | 231 | 265 | 503 | 1226 | 1600 | |
| 125 | 191 | 224 | 451 | 1243 | 1577 | 633 |
| 120 | 164 | 185 | 392 | 1245 | 1611 | |
| 115 | 136 | 148 | 330 | 1215 | 1549 | 629 |
| 110 | 113 | 118 | 265 | 1142 | 1347 | |
| 105 | 92 | 88 | 194 | 958 | 1044 | 485 |
| 100 | 75 | 67 | 122 | 674 | 747 | |
| 95 | 38 | 48 | 51 | 366 | 430 | 206 |
| 90 | 3 | 1 | 5 | 97 | 139 | |

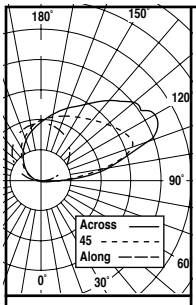
**CC-AI-3024T8-LP/ELB 63.2 % Efficiency**
**Litecontrol Certified Test Report #29521000**

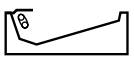
| RCC | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | .60 | .60 | .60 | .60 | .51 | .51 | .51 | .51 | .35 | .35 | .35 | .20 | .20 | .20 | .06 | .06 | .06 | .00 |
| 1 | .55 | .52 | .50 | .48 | .47 | .45 | .43 | .41 | .31 | .30 | .28 | .18 | .17 | .17 | .06 | .05 | .05 | .00 |
| 2 | .50 | .45 | .42 | .39 | .42 | .39 | .36 | .33 | .27 | .25 | .23 | .15 | .14 | .14 | .05 | .05 | .04 | .00 |
| 3 | .45 | .40 | .36 | .32 | .39 | .34 | .31 | .28 | .24 | .21 | .20 | .14 | .13 | .12 | .04 | .04 | .04 | .00 |
| 4 | .41 | .35 | .31 | .27 | .35 | .30 | .26 | .24 | .21 | .18 | .17 | .12 | .11 | .10 | .04 | .04 | .03 | .00 |
| 5 | .38 | .30 | .26 | .23 | .32 | .27 | .23 | .20 | .18 | .16 | .14 | .11 | .09 | .08 | .03 | .03 | .03 | .00 |
| 6 | .35 | .28 | .23 | .20 | .29 | .24 | .20 | .17 | .16 | .14 | .12 | .10 | .08 | .07 | .03 | .03 | .02 | .00 |
| 7 | .32 | .25 | .20 | .17 | .27 | .21 | .17 | .15 | .15 | .12 | .10 | .09 | .07 | .06 | .03 | .02 | .02 | .00 |
| 8 | .29 | .22 | .18 | .15 | .25 | .19 | .15 | .13 | .13 | .11 | .09 | .08 | .06 | .05 | .02 | .02 | .02 | .00 |
| 9 | .27 | .20 | .16 | .13 | .23 | .17 | .14 | .11 | .12 | .10 | .08 | .07 | .06 | .05 | .02 | .02 | .02 | .00 |
| 10 | .25 | .18 | .14 | .11 | .21 | .16 | .12 | .10 | .11 | .09 | .07 | .06 | .05 | .04 | .02 | .02 | .01 | .00 |

Floor Cavity Reflectance .20

**ZONAL LUMEN SUMMARY**

| ZONE | LUMENS | % LAMP | % LUMINAIRE |
|---|---|---|---|
| 180-90° | 3664 | 63.18 | 100.00 |
| 90-0° | 0 | .00 | .00 |
| 180-0° | 3664 | 63.18 | 100.00 |



2-BX

**CANDLEPOWER SUMMARY**

0° PLANE PERPENDICULAR TO LAMPS

| ANGLE | 0 | 45 | 90 | 135 | 180 | OUTPUT LUMENS |
|---|---|---|---|---|---|---|
| 180 | 963 | 963 | 963 | 963 | 963 | |
| 175 | 898 | 916 | 961 | 1006 | 1046 | 93 |
| 170 | 827 | 862 | 954 | 1061 | 1127 | |
| 165 | 776 | 811 | 935 | 1117 | 1219 | 274 |
| 160 | 701 | 766 | 907 | 1156 | 1309 | |
| 155 | 631 | 705 | 882 | 1204 | 1394 | 440 |
| 150 | 565 | 638 | 843 | 1253 | 1477 | |
| 145 | 500 | 572 | 802 | 1289 | 1604 | 585 |
| 140 | 440 | 506 | 754 | 1331 | 1745 | |
| 135 | 383 | 440 | 694 | 1382 | 1879 | 711 |
| 130 | 326 | 376 | 633 | 1469 | 2015 | |
| 125 | 267 | 321 | 567 | 1540 | 2044 | 807 |
| 120 | 229 | 264 | 497 | 1617 | 2194 | |
| 115 | 188 | 209 | 416 | 1649 | 2168 | 843 |
| 110 | 154 | 164 | 339 | 1598 | 1956 | |
| 105 | 116 | 121 | 247 | 1395 | 1377 | 660 |
| 100 | 100 | 91 | 153 | 929 | 1092 | |
| 95 | 45 | 63 | 62 | 587 | 635 | 289 |
| 90 | 1 | 1 | 5 | 118 | 158 | |

**CC-AI-3024BX-ELB 74.5 % Efficiency**
**Litecontrol Certified Test Report #29620000**

| RCC | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | .71 | .71 | .71 | .71 | .61 | .61 | .61 | .61 | .41 | .41 | .41 | .24 | .24 | .24 | .08 | .08 | .08 | .00 |
| 1 | .65 | .62 | .59 | .57 | .55 | .53 | .51 | .48 | .36 | .35 | .34 | .21 | .20 | .20 | .07 | .06 | .06 | .00 |
| 2 | .59 | .54 | .49 | .46 | .50 | .46 | .42 | .40 | .31 | .29 | .28 | .18 | .17 | .16 | .06 | .06 | .05 | .00 |
| 3 | .54 | .47 | .42 | .38 | .46 | .40 | .36 | .33 | .28 | .25 | .23 | .16 | .15 | .14 | .05 | .05 | .04 | .00 |
| 4 | .49 | .41 | .36 | .32 | .41 | .36 | .31 | .28 | .24 | .22 | .20 | .14 | .13 | .12 | .05 | .04 | .04 | .00 |
| 5 | .45 | .36 | .31 | .27 | .38 | .32 | .27 | .24 | .22 | .19 | .17 | .13 | .11 | .10 | .04 | .04 | .03 | .00 |
| 6 | .41 | .33 | .27 | .23 | .35 | .28 | .23 | .20 | .19 | .16 | .14 | .11 | .10 | .08 | .04 | .03 | .03 | .00 |
| 7 | .38 | .29 | .24 | .20 | .32 | .25 | .21 | .17 | .17 | .14 | .12 | .10 | .08 | .07 | .03 | .03 | .02 | .00 |
| 8 | .35 | .26 | .21 | .17 | .29 | .23 | .18 | .15 | .16 | .13 | .11 | .09 | .08 | .06 | .03 | .02 | .02 | .00 |
| 9 | .32 | .24 | .18 | .15 | .27 | .20 | .16 | .13 | .14 | .11 | .09 | .08 | .07 | .06 | .03 | .02 | .02 | .00 |
| 10 | .30 | .21 | .17 | .13 | .25 | .18 | .14 | .12 | .13 | .10 | .08 | .08 | .06 | .05 | .02 | .02 | .02 | .00 |

Floor Cavity Reflectance .20

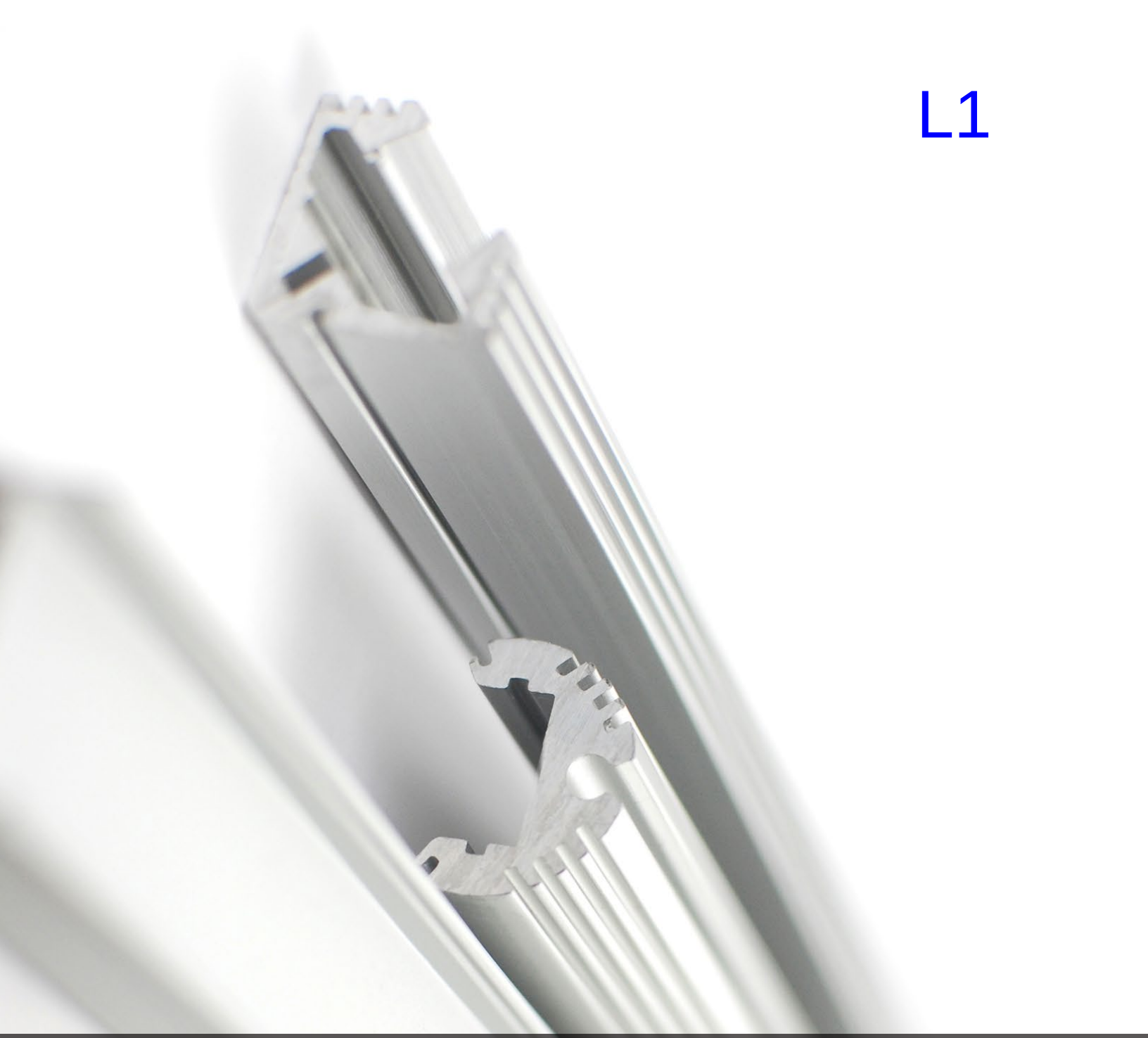
**ZONAL LUMEN SUMMARY**

| ZONE | LUMENS | % LAMP | % LUMINAIRE |
|---|---|---|---|
| 180-90° | 4696 | 74.54 | 100.00 |
| 90-0° | 0 | .00 | .00 |
| 180-0° | 4696 | 74.54 | 100.00 |

| | | | |
|---|---|---|---|
| TOTAL LUMENS | 2484.0 lm | TOTAL LUMENS | 2059.2 lm |
| Tj | 85° | Ta | 25°C |



WE-EF DOES NOT ACCEPT RESPONSIBILITY FOR THE CORRECTNESS OR COMPATIBILITY OF DATA PREPARED OTHER THAN BY ITS AUTHORISED STAFF.
WE-EF REPRODUCTION, IN PART OR FULL, IS PERMITTED ONLY IN CONNECTION WITH ACTIVITIES INVOLVING ORIGINAL WE-EF PRODUCTS.
WE-EF IS ENTITLED TO WITHDRAW RIGHTS FROM PARTIES IT DEEMS UNFIT DUE TO IMPROPER APPLICATION.



# CHANNEL

Our RibbonLyte can be mounted in countless ways, and offers lighting designers nearly infinite possibilities to be creative with lighting in ways they never could before. But for straight, linear installations we always recommend mounting in channel. It is the best way to keep your RibbonLyte secure and it gives you the ability to easily create a custom fixture tailored to the exact length you specify.

Pictured: Round and AV1 channel

# CHANNEL AT3

Available in 1 and 2 meter lengths

Slim profile, grazer lens

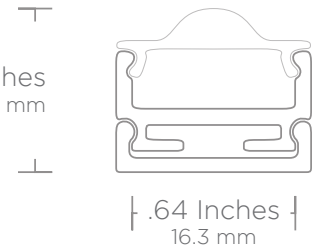
Top channel slides into fixed base channel

UV resistant

IP20 grade aluminum

End caps provide a finished look to the fixture

## DIMENSIONS




## PART NUMBER BUILDER for purchasing channel individually

| Category | | Model | | Length | | Lens | | |
|---|---|---|---|---|---|---|---|---|
| CH | + | AT3 | + | ☐ | + | ☐ | = | Your Part Number |
| | | | | 1 - 1 Meter<br>2 - 2 Meter | | Blank - None<br>G - Grazer | | Example: CHAT32G |

## PART NUMBER BUILDER for purchasing channel and ribbonlyte as a package

| Category | | Channel Model | | Channel Lens | | LED Voltage | | LED Waterproof Rating | |
|---|---|---|---|---|---|---|---|---|---|
| CH | + | AT3 | + | ☐ | + | ☐ | + | ☐ | + |
| | | | | Blank - None<br>G - Grazer | | 12 - 12 Volts<br>24 - 24 Volts | | Blank - None<br>65 - IP65<br>68 - IP68 | |

| LED Wattage | | LED Color (Temp.) | | Length | | |
|---|---|---|---|---|---|---|
| ☐ | + | ☐ | + | ☐ | = | Your Part Number |
| See RibbonLyte Section for Available Wattages | | See RibbonLyte Section for Available Colors and Color Temperatures | | Your Desired Length in Feet | | Example: CHAT3G124.42410 |

Rev. 2013.09.05

# CHANNEL AT3

## ACCESSORIES FOR **AT3**



End cap with wiring hole
CHCAPAT30



End cap without hole
CHCAPAT3

Grazer lens
CHLENSAT31G
CHLENSAT32G

Mounting Rail
CHMNTAT3

## RIBBONLYTE **COMPATIBILITY**

The following RibbonLyte will fit in AT3 channel:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Non-Waterproof (IP40 + IP65) | Static White: | 1.5 | 2.2 | 3.0 | 4.4 | 5.0 | 6.0 | 8.8 |
| | Variable White: | 3.0 | VWA | VWR | | | | |
| | Static Color: | 1.5 | 2.2 | 3.0 | 4.4 | 5.0 | 6.0 | 8.8 |
| | RGB: | 2.2 | 4.4 | RGBW | RGBA | | | |
| | Side: | 2.9 | | | | | | |
| IP68 | Static White: | 1.5 | 2.2 | 3.0 | 4.4 | 5.0 | 6.0 | |
| | Variable White: | 3.0 | VWA | VWR | | | | |
| | Static Color: | 1.5 | 2.2 | 3.0 | 4.4 | 5.0 | 6.0 | |
| | RGB: | 2.2 | 4.4 | RGBW | RGBA | Addressable | | |
| | Side (IP67): | 2.9 | | | | | | |

Rev. 2013.09.05

# CHANNEL MATRIX

## AC1

Part: CHAC1
Dimensions: 0.63” W x 0.63” H
Lenses: Clear, Milky, Frosted
Mounting Clips

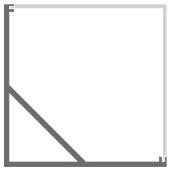
## AC2

Part: CHAC2
Dimensions: 0.63” W x 0.63” H
Lenses: Clear, Milky, Frosted
Mounting Clips

## AC3

Part: CHAC3
Dimensions: 0.73” W x 0.73” H
Lenses: Clear, Milky, Frosted
Mounting Clips

## AC4



Part: CHAC4
Dimensions: 1.17” W x 1.17” H
Lenses: Clear, Milky, Frosted

## AC5

Part: CHAC5
Dimensions: 1.17” W x 1.17” H
Lenses: Clear, Milky, Frosted

## AA

Part: CHAA
Dimensions: 0.76” W x 0.32” H
Lenses: Clear, Milky, Frosted

## AR1

Part: CHAR1
Dimensions: 0.90” W x 0.35” H
Lenses: Clear, Milky, Frosted

## AR2

Part: CHAR2
Dimensions: 0.92” W x 0.60” H
Lenses: Clear, Milky, Frosted

## AR3

Part: CHAR3
Dimensions: 1.32” W x 0.41” H
Lenses: Clear, Milky, Frosted

## AR4

Part: CHAR4
Dimensions: 0.86” W x 0.48” H
Lenses: Clear, Milky, Frosted

## AS1

Part: CHAS1
Dimensions: 0.67” W x 0.35” H
Lenses: Clear, Milky, Frosted
Mounting Clips

## AS2

Part: CHAS2
Dimensions: 0.68” W x 0.60” H
Lenses: Clear, Milky, Frosted
Mounting Clips

Rev. 2013.09.05

# CHANNEL MATRIX

## AS3

Part: CHAS3
Dimensions: 0.92” W x 0.41” H
Lenses: Clear, Milky, Frosted
Mounting Clips

## AS4

Part: CHAS4
Dimensions: 0.63” W x 0.48” H
Lenses: Clear, Milky, Frosted
Mounting Clips

## AT1

Part: CHAT1
Dimensions: 0.78” W x 0.78” H
Lenses: Clear, Milky, Frosted
Mounting Rail

## AT2

Part: CHAT2
Dimensions: 0.78” W x 0.78” H
Lenses: Clear, Milky, Frosted
Mounting Rail

## AT3

Part: CHAT3
Dimensions: 0.78” W x 0.62” H
Lenses: Grazer
Mounting Rail

## AV1

Part: CHAV1
Dimensions: 0.75” W x 0.75” H
Lenses: Clear, Milky, Frosted
Mounting Clips

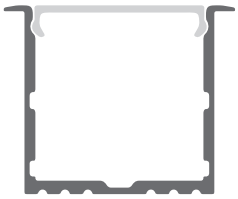
## AP1

Part: CHAP1
Dimensions: 0.75” W x 0.82” H
Lenses: Clear, Milky, Frosted
Tiltable Stands

## AL60

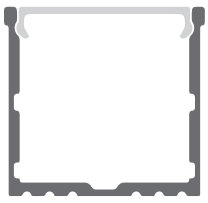
Part: CHAL60
Dimensions: 0.67” W x 0.54” H
Lenses: Grazer

## W31



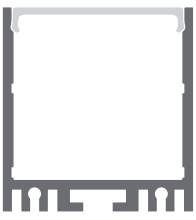
Part: CHW31
Dimensions: 1.72” W x 1.38” H
Lenses: Clear, Milky, Frosted

## W35



Part: CHW35
Dimensions: 1.38” W x 1.38” H
Lenses: Clear, Milky, Frosted

## WH35



Part: CHW35
Dimensions: 1.38” W x 1.48” H
Lenses: Clear, Milky, Frosted
Hanging Kit

## ROUND

Part: CHROUND
Dimensions: 0.80” Diameter
Lenses: Clear, Milky, Frosted
Mounting Clips

Rev. 2013.09.05

# STATIC WHITE RIBBONLYTE

White lighting is the way we see the world. With so many variations of color temperature and wattage, our Static White RibbonLyte will help you create the ultimate lighting scheme.

Whether you want to imitate the warm glow of candelight, or provide a high visibility work environment similar to a bright afternoon outdoors, we can provide a solution to fill your needs.

Not only do we offer a variety of color temperatures, but our RibbonLyte comes in a number of wattages as well. As energy costs rise, the benefits of our lower wattage LEDs are even more apparent.

Pictured: RibbonLyte 4.4 3000K @Fetta Panini Bar, Toronto Pearson Intl Airport, Mississagua, ON
Designed by ICRAVE

**ACOLYTE LED** 251 West 30th St, Suite 12E New York, NY 10001 **212.629.6830** INFO@**ACOLYTELED.COM**

White

# RIBBONLYTE 1.5

RoHS Compliant

Dry or wet location flexible LEDs

12 or 24 Volt

1.5 Watts per foot, 18 LEDs per foot

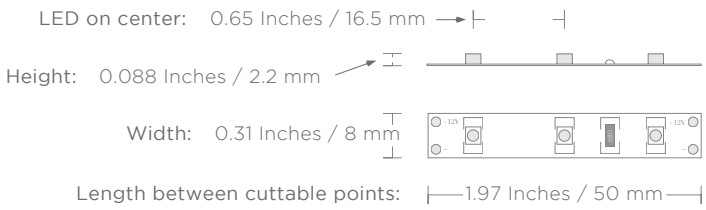
IP65 and IP68 versions are UV resistant

2400K, 2700K, 3000K, 3500K, 4100K, and 6000K

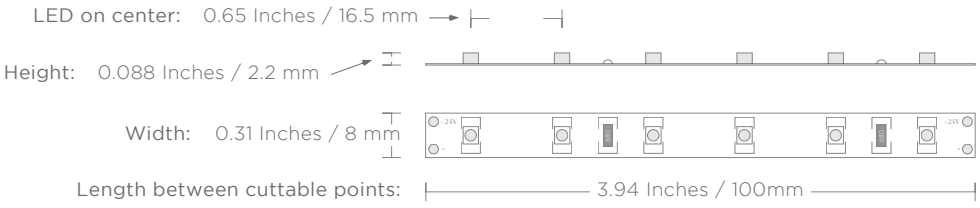
Cuttable every 1.97 inches (12V) or 3.94 inches (24V)

## DIMENSIONS

### 1.5 - 12 Volt




### 1.5 - 24 Volt



## PART NUMBER BUILDER

| Category | | Waterproof | | Voltage | | Wattage | | Color Temperature | | |
|---|---|---|---|---|---|---|---|---|---|---|
| RB | + | | + | | + | 1.5 | + | | = | Your Part Number<br>Example: RB121.527 |
| | | 65 - IP65<br>68 - IP68<br>Blank - None (IP40) | | 12 - 12V<br>24 - 24V | | | | 24 - 2400K<br>27 - 2700K<br>30 - 3000K<br>35 - 3500K<br>41 - 4100K<br>60 - 6000K | | |

Rev. 2013.08.08

## SPECIFICATIONS **RIBBONLYTE 1.5**

| | |
|---|---|
| Operating Voltage | 12 Volt / 24 Volt |
| Power Consumption | 1.5 Watts / Linear Foot |
| Amperage | 12v: 125 mA / Foot 24v: 63 mA / Foot |
| Protection Rating | IP40/IP65/IP68 |
| Dimming | Triac / 0-10 Volt / DMX / Lutron A-Series 1% dimming LED drivers |
| Operating Temperature | -40° C to 70° C |
| Color Temperature | 2400K 2700K 3000K 3500K 4100K 6000K |
| Lumen Output | 2400K: 92.86 lm/ft; 2700K: 80.46 lm/ft; 3000K: 82.8 lm/ft; 3500K: 96.84 lm/ft; 4100K: 85.68 lm/ft; 6000K: 89.64 lm/ft |
| Binning Tolerance | +/- 100K |
| LED Beam Angle | 160° |
| Lamp Life | 50,000 Hours |
| Cuttable | 12v: Every 1.97" (50 mm) 24v: Every 3.94" (100 mm) |
| CRI*<br>*CRI >90 available upon request | 2400K: >50.4; 2700K: >56; 3000K: >62.8; 3500K: >66.3; 4100K: >69.2; 6000K: >73.8 |
| Lumens per Watt (per ft) | 2400K: 61.91 lm/W; 2700K: 53.64 lm/W; 3000K: 55.2 lm/W; 3500K: 64.56 lm/W; 4100K: 57.12 lm/W; 6000K: 59.76 lm/W |
| Constant Voltage | Yes |
| Max Length Before Additional Power is Needed | 12V: 29' 4.6" (9 Meters) 24V: 68' 7.5" (21 Meters) |

## DIMENSIONS **RIBBONLYTE 1.5**

### IP40 + IP65

| | |
|---|---|
| Width | 0.31" / 8 mm |
| Length | Up to 29' 4.6" (12V) in ~2 inch sections or 68' 7.5" (24V) in ~4 inch sections |
| Height | IP40: 0.088" / 2.2 mm IP65: 0.125" / 3.2 mm |

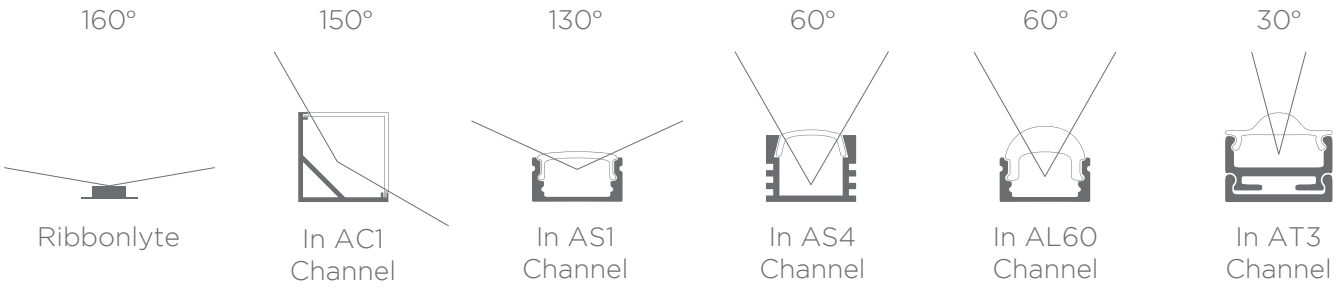
### OUTDOOR - IP68

| | |
|---|---|
| Width | 0.41" / 10.4 mm |
| Length | Up to 29' 4.6" (12V) in ~2 inch sections or 68' 7.5" (24V) in ~4 inch sections |
| Height | 0.18" / 4.5 mm |

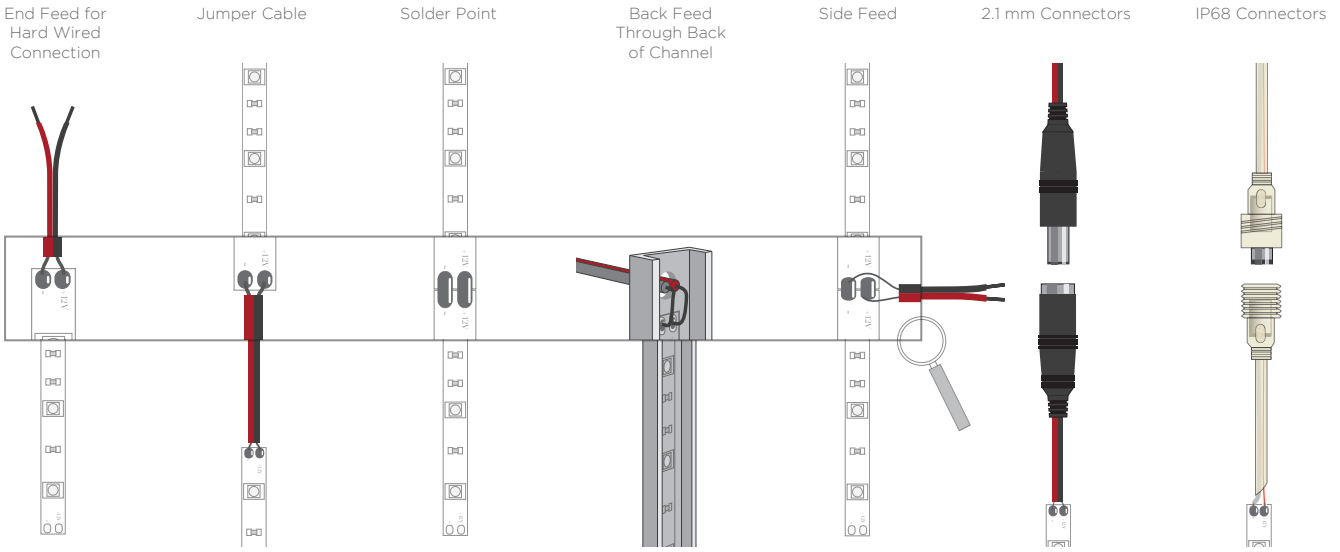
Rev. 2013.08.08

# RIBBONLYTE 1.5

## SAMPLE **BEAM ANGLES**




## CONNECTION **OPTIONS**




## CHANNEL **COMPATIBILITY**

| Protection | Compatible Channels |
|---|---|
| Non-Waterproof (IP40) | All Channel |
| IP65 | All Channel |
| IP68 | All Channel |

Rev. 2013.08.08

## USAGE **GUIDELINES**

Compatible with a wide variety of control products including the entire line of Lutron dimming systems.

For use with Acolyte drivers, triac dimming modules, 0-10 modules and interface controllers (DMXINF models).

Use with non-Acolyte triac, MLV or ELV drivers is not supported or warrantied.

Due to the nature of the product, RibbonLyte cuttable lengths are generally longer or shorter than the customer requested length. Unless specified, RibbonLyte is factory cut at the shorter cuttable point.

IP65 and IP68 versions can be used in wet, outdoor locations around swimming pools and spa tubs, but not submerged in swimming pools and spa tubs.

We reserve the right to make changes to product lineup, specifications, design and finishes at any time without notice.

## ACCESSORIES **RIBBONLYTE 1.5**

### CHANNEL
See Acolyte Channel Guide

### DRIVERS
See Acolyte Drivers Guide

### CONTROLLERS
See Acolyte Controllers Guide

### PARTS AND ACCESSORIES
See Acolyte Parts and Accessories Guide

# STATIC WHITE RIBBONLYTE COMPARISON GUIDE

| SPECIFICATIONS | 1.5 | 2.2 | 3.0 | 4.4 | 5.0 | 6.0 | 8.8 |
|---|---|---|---|---|---|---|---|
| Operating Voltage | 12 V and 24 V versions | | | | | | 24 V |
| Power Consumption | 1.5 W / Ft | 2.2 W / Ft | 3.0 W / Ft | 4.4 W / Ft | 5.0 W / Ft | 6.0 W / Ft | 8.8 W / Ft |
| Current (mA) - 12 V | 125 | 183 | 250 | 366 | 417 | 500 | -- |
| Current (mA) - 24 V | 63 | 92 | 125 | 183 | 208 | 250 | 367 |
| Protection Rating | IP45, IP65 and IP68 | | | | | | |
| Beam Angle | 160° | | | | | | |
| Color Temperatures | 2400K, 2700K, 3000K, 3500K, 4100K, 6000K (5.0 is only avail. in 3000K, 4100K, 6000K) | | | | | | |
| LED's / Foot | 18 | 9 | 36 | 18 | 15 | 72 | 36 |
| Width - IP45 / IP65 | 0.31" | 0.39" | 0.31" | 0.39" | 0.41" | 0.50" | 0.59" |
| Width - IP68 | 0.41" | 0.52" | 0.41" | 0.52" | 0.54" | 0.66" | 0.70" |
| Cuttable Length - 12 V | 1.97" | 3.94" | 0.98" | 1.97" | 2.46" | 1.97" | -- |
| Cuttable Length - 24 V | 3.94" | 6.55" | 1.97" | 3.94" | 4.92" | 3.94" | 1.97" |
| Max Length - 12 V | 29' 4.6" | 26' 3" | 19' 8.2" | 16' 4.9" | 16' 4.9" | 16' 4.9" | -- |
| Max Length - 24 V | 68' 7.5" | 45' 10.3" | 32' 9.7" | 26' 3" | 32' 9.7" | 26' 3.0" | 25' 7.1" |
| Lumen / Ft - 2400 K | 92.86 | 149.13 | 185.73 | 298.26 | -- | 371.46 | 596.52 |
| Lumen / Ft - 2700 K | 80.46 | 153.99 | 160.92 | 307.98 | -- | 321.84 | 615.96 |
| Lumen / Ft - 3000 K | 82.80 | 175.68 | 165.60 | 351.36 | 438.91 | 331.20 | 702.72 |
| Lumen / Ft - 3500 K | 96.84 | 161.10 | 193.68 | 322.20 | -- | 387.36 | 644.40 |
| Lumen / Ft - 4100 K | 85.68 | 157.23 | 171.36 | 314.46 | 441.96 | 342.72 | 628.92 |
| Lumen / Ft - 6000 K | 89.64 | 169.38 | 179.28 | 338.76 | 445.01 | 358.56 | 677.52 |
| Lumens / Watt - 2400 K | 61.91 | 67.79 | 61.91 | 67.79 | -- | 61.91 | 67.69 |
| Lumens / Watt - 2700 K | 53.64 | 70.00 | 53.64 | 70.00 | -- | 53.64 | 70.00 |
| Lumens / Watt - 3000 K | 55.2 | 79.85 | 55.2 | 79.85 | 87.78 | 55.20 | 79.85 |
| Lumens / Watt - 3500 K | 64.56 | 73.23 | 64.56 | 73.23 | -- | 64.56 | 73.23 |
| Lumens / Watt - 4100 K | 57.12 | 71.47 | 57.12 | 71.47 | 88.39 | 57.12 | 71.47 |
| Lumens / Watt - 6000 K | 59.76 | 77.00 | 59.76 | 77.00 | 89.00 | 59.76 | 77.00 |
| CRI - 2400 K | 50.4 | 50.5 | 50.4 | 50.5 | -- | 50.4 | 50.5 |
| CRI - 2700 K | 56.0 | 58.9 | 56.0 | 58.9 | -- | 56.0 | 58.9 |
| CRI - 3000 K | 62.8 | 63.0 | 62.8 | 63.0 | 72.0 | 62.8 | 63.0 |
| CRI - 3500 K | 66.3 | 65.3 | 66.3 | 65.3 | -- | 66.3 | 65.3 |
| CRI - 4100 K | 69.2 | 70.8 | 69.2 | 70.8 | 70.0 | 69.2 | 70.8 |
| CRI - 6000 K | 73.8 | 73.4 | 73.8 | 73.4 | 69.0 | 73.8 | 73.4 |

Rev. 2013.08.08

# STATIC WHITE RIBBONLYTE

White lighting is the way we see the world. With so many variations of color temperature and wattage, our Static White RibbonLyte will help you create the ultimate lighting scheme.

Whether you want to imitate the warm glow of candelight, or provide a high visibility work environment similar to a bright afternoon outdoors, we can provide a solution to fill your needs.

Not only do we offer a variety of color temperatures, but our RibbonLyte comes in a number of wattages as well. As energy costs rise, the benefits of our lower wattage LEDs are even more apparent.

Pictured: RibbonLyte 4.4 3000K @Fetta Panini Bar, Toronto Pearson Intl Airport, Mississagua, ON
Designed by ICRAVE

**ACOLYTE LED** 251 West 30th St, Suite 12E New York, NY 10001 **212.629.6830** INFO@**ACOLYTELED.COM**

White

# RIBBONLYTE 1.5

RoHS Compliant

Dry or wet location flexible LEDs

12 or 24 Volt

1.5 Watts per foot, 18 LEDs per foot

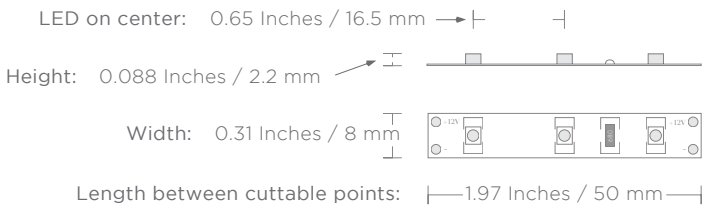
IP65 and IP68 versions are UV resistant

2400K, 2700K, 3000K, 3500K, 4100K, and 6000K

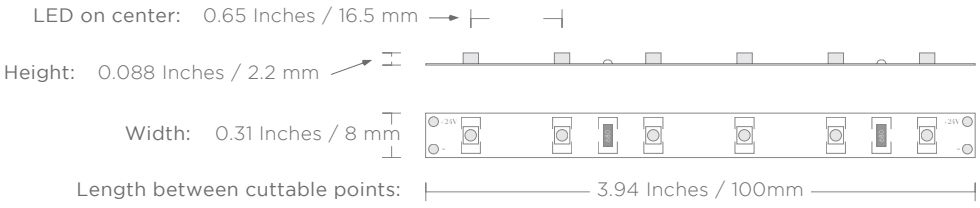
Cuttable every 1.97 inches (12V) or 3.94 inches (24V)

## DIMENSIONS

### 1.5 - 12 Volt




### 1.5 - 24 Volt



## PART NUMBER BUILDER

| Category | | Waterproof | | Voltage | | Wattage | | Color Temperature | | |
|---|---|---|---|---|---|---|---|---|---|---|
| RB | + | | + | | + | 1.5 | + | | = | Your Part Number<br>Example: RB121.527 |
| | | 65 - IP65<br>68 - IP68<br>Blank - None (IP40) | | 12 - 12V<br>24 - 24V | | | | 24 - 2400K<br>27 - 2700K<br>30 - 3000K<br>35 - 3500K<br>41 - 4100K<br>60 - 6000K | | |

Rev. 2013.08.08

## SPECIFICATIONS **RIBBONLYTE 1.5**

| | |
|---|---|
| Operating Voltage | 12 Volt / 24 Volt |
| Power Consumption | 1.5 Watts / Linear Foot |
| Amperage | 12v: 125 mA / Foot 24v: 63 mA / Foot |
| Protection Rating | IP40/IP65/IP68 |
| Dimming | Triac / 0-10 Volt / DMX / Lutron A-Series 1% dimming LED drivers |
| Operating Temperature | -40° C to 70° C |
| Color Temperature | 2400K 2700K 3000K 3500K 4100K 6000K |
| Lumen Output | 2400K: 92.86 lm/ft; 2700K: 80.46 lm/ft; 3000K: 82.8 lm/ft; 3500K: 96.84 lm/ft; 4100K: 85.68 lm/ft; 6000K: 89.64 lm/ft |
| Binning Tolerance | +/- 100K |
| LED Beam Angle | 160° |
| Lamp Life | 50,000 Hours |
| Cuttable | 12v: Every 1.97" (50 mm) 24v: Every 3.94" (100 mm) |
| CRI*<br>*CRI >90 available upon request | 2400K: >50.4; 2700K: >56; 3000K: >62.8; 3500K: >66.3; 4100K: >69.2; 6000K: >73.8 |
| Lumens per Watt (per ft) | 2400K: 61.91 lm/W; 2700K: 53.64 lm/W; 3000K: 55.2 lm/W; 3500K: 64.56 lm/W; 4100K: 57.12 lm/W; 6000K: 59.76 lm/W |
| Constant Voltage | Yes |
| Max Length Before Additional Power is Needed | 12V: 29' 4.6" (9 Meters) 24V: 68' 7.5" (21 Meters) |

## DIMENSIONS **RIBBONLYTE 1.5**

### IP40 + IP65

| | |
|---|---|
| Width | 0.31" / 8 mm |
| Length | Up to 29' 4.6" (12V) in ~2 inch sections or 68' 7.5" (24V) in ~4 inch sections |
| Height | IP40: 0.088" / 2.2 mm IP65: 0.125" / 3.2 mm |

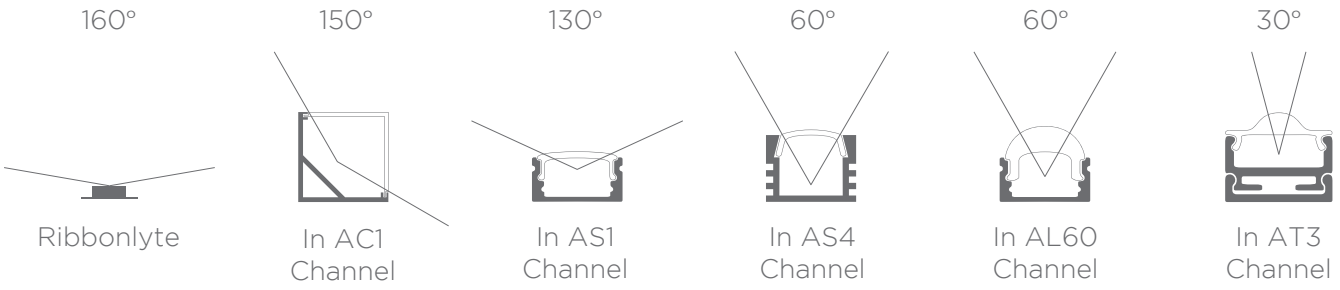
### OUTDOOR - IP68

| | |
|---|---|
| Width | 0.41" / 10.4 mm |
| Length | Up to 29' 4.6" (12V) in ~2 inch sections or 68' 7.5" (24V) in ~4 inch sections |
| Height | 0.18" / 4.5 mm |

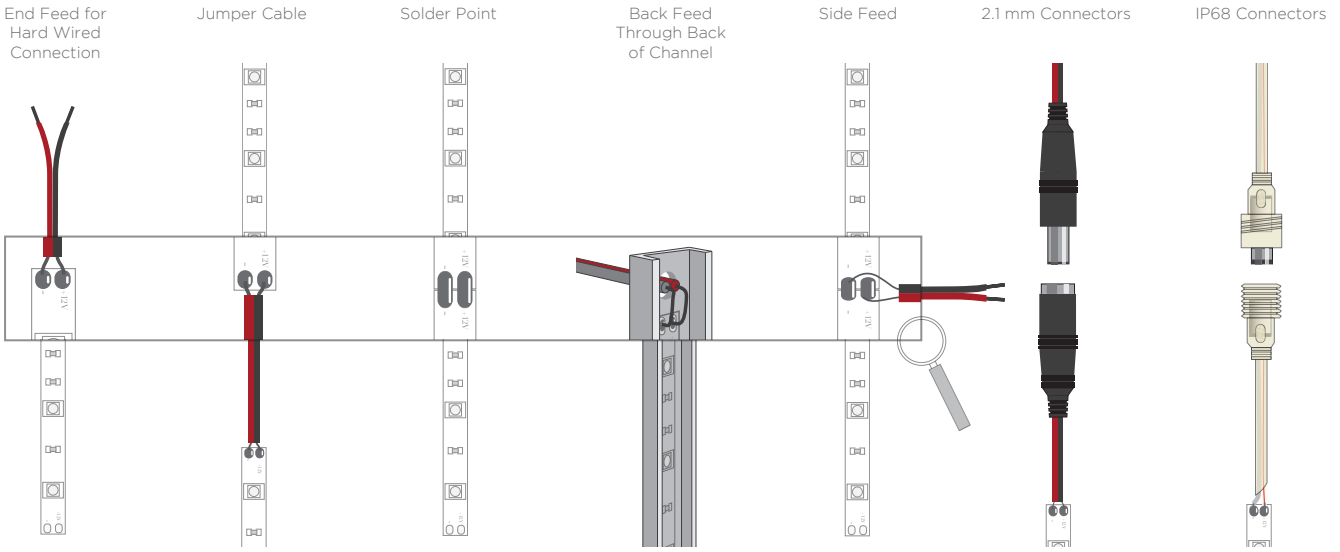
Rev. 2013.08.08

# RIBBONLYTE 1.5

## SAMPLE **BEAM ANGLES**




## CONNECTION **OPTIONS**




## CHANNEL **COMPATIBILITY**

| Protection | Compatible Channels |
|---|---|
| Non-Waterproof (IP40) | All Channel |
| IP65 | All Channel |
| IP68 | All Channel |

Rev. 2013.08.08

## USAGE **GUIDELINES**

Compatible with a wide variety of control products including the entire line of Lutron dimming systems.

For use with Acolyte drivers, triac dimming modules, 0-10 modules and interface controllers (DMXINF models).

Use with non-Acolyte triac, MLV or ELV drivers is not supported or warrantied.

Due to the nature of the product, RibbonLyte cuttable lengths are generally longer or shorter than the customer requested length. Unless specified, RibbonLyte is factory cut at the shorter cuttable point.

IP65 and IP68 versions can be used in wet, outdoor locations around swimming pools and spa tubs, but not submerged in swimming pools and spa tubs.

We reserve the right to make changes to product lineup, specifications, design and finishes at any time without notice.

## ACCESSORIES **RIBBONLYTE 1.5**

### CHANNEL
See Acolyte Channel Guide

### DRIVERS
See Acolyte Drivers Guide

### CONTROLLERS
See Acolyte Controllers Guide

### PARTS AND ACCESSORIES
See Acolyte Parts and Accessories Guide

# STATIC WHITE RIBBONLYTE COMPARISON GUIDE

| SPECIFICATIONS | 1.5 | 2.2 | 3.0 | 4.4 | 5.0 | 6.0 | 8.8 |
|---|---|---|---|---|---|---|---|
| Operating Voltage | 12 V and 24 V versions | | | | | | 24 V |
| Power Consumption | 1.5 W / Ft | 2.2 W / Ft | 3.0 W / Ft | 4.4 W / Ft | 5.0 W / Ft | 6.0 W / Ft | 8.8 W / Ft |
| Current (mA) - 12 V | 125 | 183 | 250 | 366 | 417 | 500 | -- |
| Current (mA) - 24 V | 63 | 92 | 125 | 183 | 208 | 250 | 367 |
| Protection Rating | IP45, IP65 and IP68 | | | | | | |
| Beam Angle | 160° | | | | | | |
| Color Temperatures | 2400K, 2700K, 3000K, 3500K, 4100K, 6000K (5.0 is only avail. in 3000K, 4100K, 6000K) | | | | | | |
| LED's / Foot | 18 | 9 | 36 | 18 | 15 | 72 | 36 |
| Width - IP45 / IP65 | 0.31" | 0.39" | 0.31" | 0.39" | 0.41" | 0.50" | 0.59" |
| Width - IP68 | 0.41" | 0.52" | 0.41" | 0.52" | 0.54" | 0.66" | 0.70" |
| Cuttable Length - 12 V | 1.97" | 3.94" | 0.98" | 1.97" | 2.46" | 1.97" | -- |
| Cuttable Length - 24 V | 3.94" | 6.55" | 1.97" | 3.94" | 4.92" | 3.94" | 1.97" |
| Max Length - 12 V | 29' 4.6" | 26' 3" | 19' 8.2" | 16' 4.9" | 16' 4.9" | 16' 4.9" | -- |
| Max Length - 24 V | 68' 7.5" | 45' 10.3" | 32' 9.7" | 26' 3" | 32' 9.7" | 26' 3.0" | 25' 7.1" |
| Lumen / Ft - 2400 K | 92.86 | 149.13 | 185.73 | 298.26 | -- | 371.46 | 596.52 |
| Lumen / Ft - 2700 K | 80.46 | 153.99 | 160.92 | 307.98 | -- | 321.84 | 615.96 |
| Lumen / Ft - 3000 K | 82.80 | 175.68 | 165.60 | 351.36 | 438.91 | 331.20 | 702.72 |
| Lumen / Ft - 3500 K | 96.84 | 161.10 | 193.68 | 322.20 | -- | 387.36 | 644.40 |
| Lumen / Ft - 4100 K | 85.68 | 157.23 | 171.36 | 314.46 | 441.96 | 342.72 | 628.92 |
| Lumen / Ft - 6000 K | 89.64 | 169.38 | 179.28 | 338.76 | 445.01 | 358.56 | 677.52 |
| Lumens / Watt - 2400 K | 61.91 | 67.79 | 61.91 | 67.79 | -- | 61.91 | 67.69 |
| Lumens / Watt - 2700 K | 53.64 | 70.00 | 53.64 | 70.00 | -- | 53.64 | 70.00 |
| Lumens / Watt - 3000 K | 55.2 | 79.85 | 55.2 | 79.85 | 87.78 | 55.20 | 79.85 |
| Lumens / Watt - 3500 K | 64.56 | 73.23 | 64.56 | 73.23 | -- | 64.56 | 73.23 |
| Lumens / Watt - 4100 K | 57.12 | 71.47 | 57.12 | 71.47 | 88.39 | 57.12 | 71.47 |
| Lumens / Watt - 6000 K | 59.76 | 77.00 | 59.76 | 77.00 | 89.00 | 59.76 | 77.00 |
| CRI - 2400 K | 50.4 | 50.5 | 50.4 | 50.5 | -- | 50.4 | 50.5 |
| CRI - 2700 K | 56.0 | 58.9 | 56.0 | 58.9 | -- | 56.0 | 58.9 |
| CRI - 3000 K | 62.8 | 63.0 | 62.8 | 63.0 | 72.0 | 62.8 | 63.0 |
| CRI - 3500 K | 66.3 | 65.3 | 66.3 | 65.3 | -- | 66.3 | 65.3 |
| CRI - 4100 K | 69.2 | 70.8 | 69.2 | 70.8 | 70.0 | 69.2 | 70.8 |
| CRI - 6000 K | 73.8 | 73.4 | 73.8 | 73.4 | 69.0 | 73.8 | 73.4 |

Rev. 2013.08.08

# STATIC WHITE RIBBONLYTE

White lighting is the way we see the world. With so many variations of color temperature and wattage, our Static White RibbonLyte will help you create the ultimate lighting scheme.

Whether you want to imitate the warm glow of candelight, or provide a high visibility work environment similar to a bright afternoon outdoors, we can provide a solution to fill your needs.

Not only do we offer a variety of color temperatures, but our RibbonLyte comes in a number of wattages as well. As energy costs rise, the benefits of our lower wattage LEDs are even more apparent.

Pictured: RibbonLyte 4.4 3000K @Fetta Panini Bar, Toronto Pearson Intl Airport, Mississagua, ON
Designed by ICRAVE

**ACOLYTE LED** 251 West 30th St, Suite 12E New York, NY 10001 **212.629.6830** INFO@**ACOLYTELED.COM**

White

# RIBBONLYTE 5.0

RoHS Compliant

Dry or wet location flexible LEDs

12 or 24 Volt

5.0 Watts per foot, 15 LEDs per foot

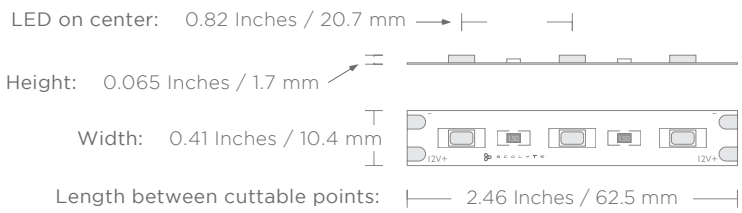
IP65 and IP68 versions are UV resistant

3000K, 4100K, and 6000K

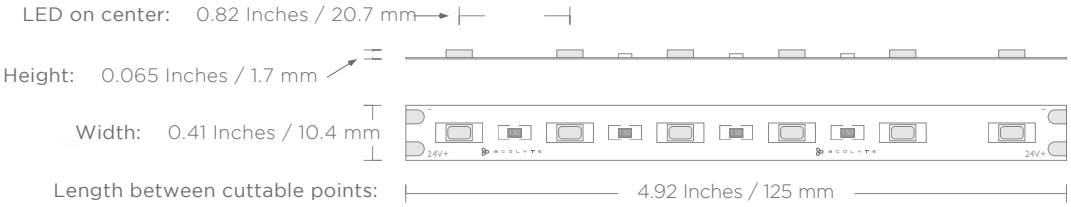
Cuttable every 2.46 inches (12V) or 4.92 inches (24V)

## DIMENSIONS

### 5.0 - 12 Volt




### 5.0 - 24 Volt



## PART NUMBER BUILDER

| Category | | Waterproof | | Voltage | | Wattage | | Color Temperature | | |
|---|---|---|---|---|---|---|---|---|---|---|
| RB | + | | + | | + | 5.0 | + | | = | Your Part Number |
| | | 65 - IP65<br>68 - IP68<br>Blank - None (IP40) | | 12 - 12V<br>24 - 24V | | | | 30 - 3000K<br>41 - 4100K<br>60 - 6000K | | Example: RB125.030 |

Rev. 2013.08.08

## SPECIFICATIONS **RIBBONLYTE 5.0**

| | |
|---|---|
| Operating Voltage | 12 Volt / 24 Volt |
| Power Consumption | 5.0 Watts / Linear Foot |
| Milliamperes | 12v: 417 mA / Foot 24v: 208 mA / Foot |
| Protection Rating | IP40/IP65/IP68 |
| Dimming | Triac / 0-10 Volt / DMX / Lutron A-Series 1% dimming LED drivers |
| Operating Temperature | -40° C to 70° C |
| Color Temperature | 3000K, 4100K and 6000K |
| Lumen Output | 3000K: 438.91 lm/ft; 4100K: 441.96 lm/ft; 6000K: 445.01 lm/ft |
| Binning Tolerance | +/- 100K |
| LED Beam Angle | 160° |
| Lamp Life | 50,000 Hours |
| Cuttable | 12v: Every 2.46" (62.5 mm) 24v: Every 4.92" (125 mm) |
| CRI*<br>*CRI >90 available upon request | 3000K: >72; 4100K: >70; 6000K: >69 |
| Lumens per Watt (per ft) | 3000K: 87.78 lm/W; 4100K: 88.39 lm/W; 6000K: 89.00 lm/W |
| Constant Voltage | Yes |
| Max Length Before Additional Power is Needed | 12V: 16' 4.9" (5 Meters) 24V: 32' 9.7" (10 Meters) |

## DIMENSIONS **RIBBONLYTE 5.0**

### IP40 + IP65

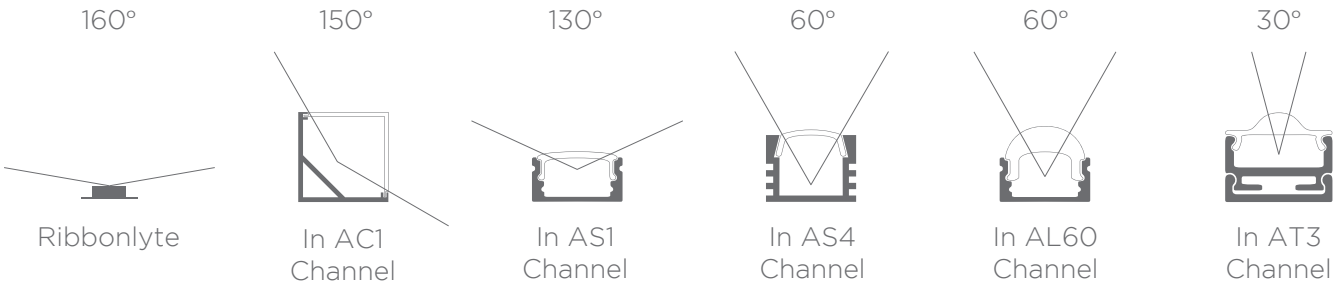
| | |
|---|---|
| Width | 0.41" / 10.41 mm |
| Length | Up to 16' 4.9" (12V) in ~2.5 inch sections or 32' 9.7" (24V) in ~5 inch sections |
| Height | IP40: 0.065" / 1.65 mm IP65: 0.125" / 3.2 mm |

### OUTDOOR - IP68

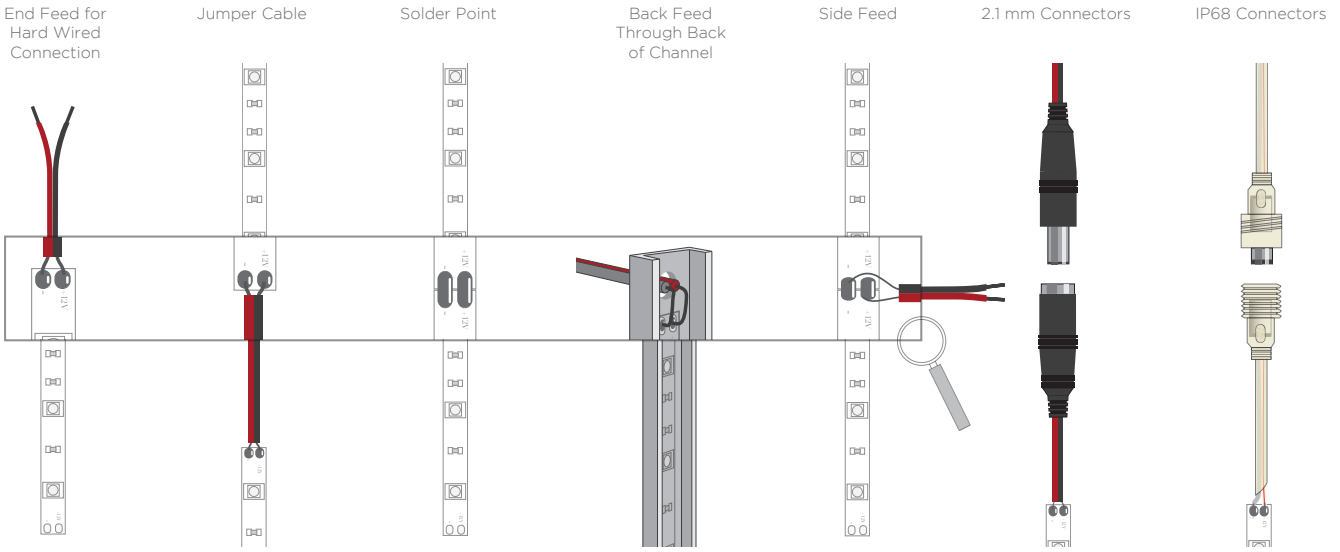
| | |
|---|---|
| Width | 0.54" / 13.3 mm |
| Length | Up to 16' 4.9" (12V) in ~2.5 inch sections or 32' 9.7" (24V) in ~5 inch sections |
| Height | 0.19" / 4.8 mm |

Rev. 2013.08.08

## SAMPLE **BEAM ANGLES**




## CONNECTION **OPTIONS**




## CHANNEL **COMPATIBILITY**

| Protection | Compatible Channels |
|---|---|
| Non-Waterproof (IP40) | All Channel |
| IP65 | All Channel |
| IP68 | AC1, AC2, AC4, AC5, AR3, AS3, AT1, AT2, AT3, AP1, W31, W35, WH35 |

Rev. 2013.08.08

## USAGE **GUIDELINES**

Compatible with a wide variety of control products including the entire line of Lutron dimming systems.

For use with Acolyte drivers, triac dimming modules, 0-10 modules and interface controllers (DMXINF models).

Use with non-Acolyte triac, MLV or ELV drivers is not supported or warrantied.

Due to the nature of the product, RibbonLyte cuttable lengths are generally longer or shorter than the customer requested length. Unless specified, RibbonLyte is factory cut at the shorter cuttable point.

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## ACCESSORIES **RIBBONLYTE 5.0**

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# STATIC WHITE RIBBONLYTE COMPARISON GUIDE

| SPECIFICATIONS | 1.5 | 2.2 | 3.0 | 4.4 | 5.0 | 6.0 | 8.8 |
|---|---|---|---|---|---|---|---|
| Operating Voltage | 12 V and 24 V versions | | | | | | 24 V |
| Power Consumption | 1.5 W / Ft | 2.2 W / Ft | 3.0 W / Ft | 4.4 W / Ft | 5.0 W / Ft | 6.0 W / Ft | 8.8 W / Ft |
| Current (mA) - 12 V | 125 | 183 | 250 | 366 | 417 | 500 | -- |
| Current (mA) - 24 V | 63 | 92 | 125 | 183 | 208 | 250 | 367 |
| Protection Rating | IP45, IP65 and IP68 | | | | | | |
| Beam Angle | 160° | | | | | | |
| Color Temperatures | 2400K, 2700K, 3000K, 3500K, 4100K, 6000K (5.0 is only avail. in 3000K, 4100K, 6000K) | | | | | | |
| LED's / Foot | 18 | 9 | 36 | 18 | 15 | 72 | 36 |
| Width - IP45 / IP65 | 0.31" | 0.39" | 0.31" | 0.39" | 0.41" | 0.50" | 0.59" |
| Width - IP68 | 0.41" | 0.52" | 0.41" | 0.52" | 0.54" | 0.66" | 0.70" |
| Cuttable Length - 12 V | 1.97" | 3.94" | 0.98" | 1.97" | 2.46" | 1.97" | -- |
| Cuttable Length - 24 V | 3.94" | 6.55" | 1.97" | 3.94" | 4.92" | 3.94" | 1.97" |
| Max Length - 12 V | 29' 4.6" | 26' 3" | 19' 8.2" | 16' 4.9" | 16' 4.9" | 16' 4.9" | -- |
| Max Length - 24 V | 68' 7.5" | 45' 10.3" | 32' 9.7" | 26' 3" | 32' 9.7" | 26' 3.0" | 25' 7.1" |
| Lumen / Ft - 2400 K | 92.86 | 149.13 | 185.73 | 298.26 | -- | 371.46 | 596.52 |
| Lumen / Ft - 2700 K | 80.46 | 153.99 | 160.92 | 307.98 | -- | 321.84 | 615.96 |
| Lumen / Ft - 3000 K | 82.80 | 175.68 | 165.60 | 351.36 | 438.91 | 331.20 | 702.72 |
| Lumen / Ft - 3500 K | 96.84 | 161.10 | 193.68 | 322.20 | -- | 387.36 | 644.40 |
| Lumen / Ft - 4100 K | 85.68 | 157.23 | 171.36 | 314.46 | 441.96 | 342.72 | 628.92 |
| Lumen / Ft - 6000 K | 89.64 | 169.38 | 179.28 | 338.76 | 445.01 | 358.56 | 677.52 |
| Lumens / Watt - 2400 K | 61.91 | 67.79 | 61.91 | 67.79 | -- | 61.91 | 67.69 |
| Lumens / Watt - 2700 K | 53.64 | 70.00 | 53.64 | 70.00 | -- | 53.64 | 70.00 |
| Lumens / Watt - 3000 K | 55.2 | 79.85 | 55.2 | 79.85 | 87.78 | 55.20 | 79.85 |
| Lumens / Watt - 3500 K | 64.56 | 73.23 | 64.56 | 73.23 | -- | 64.56 | 73.23 |
| Lumens / Watt - 4100 K | 57.12 | 71.47 | 57.12 | 71.47 | 88.39 | 57.12 | 71.47 |
| Lumens / Watt - 6000 K | 59.76 | 77.00 | 59.76 | 77.00 | 89.00 | 59.76 | 77.00 |
| CRI - 2400 K | 50.4 | 50.5 | 50.4 | 50.5 | -- | 50.4 | 50.5 |
| CRI - 2700 K | 56.0 | 58.9 | 56.0 | 58.9 | -- | 56.0 | 58.9 |
| CRI - 3000 K | 62.8 | 63.0 | 62.8 | 63.0 | 72.0 | 62.8 | 63.0 |
| CRI - 3500 K | 66.3 | 65.3 | 66.3 | 65.3 | -- | 66.3 | 65.3 |
| CRI - 4100 K | 69.2 | 70.8 | 69.2 | 70.8 | 70.0 | 69.2 | 70.8 |
| CRI - 6000 K | 73.8 | 73.4 | 73.8 | 73.4 | 69.0 | 73.8 | 73.4 |

Rev. 2013.08.08

# STATIC WHITE RIBBONLYTE

White lighting is the way we see the world. With so many variations of color temperature and wattage, our Static White RibbonLyte will help you create the ultimate lighting scheme.

Whether you want to imitate the warm glow of candelight, or provide a high visibility work environment similar to a bright afternoon outdoors, we can provide a solution to fill your needs.

Not only do we offer a variety of color temperatures, but our RibbonLyte comes in a number of wattages as well. As energy costs rise, the benefits of our lower wattage LEDs are even more apparent.

Pictured: RibbonLyte 4.4 3000K @Fetta Panini Bar, Toronto Pearson Intl Airport, Mississagua, ON
Designed by ICRAVE

White

# RIBBONLYTE 8.8

RoHS Compliant

Dry or wet location flexible LEDs

24 Volt Only

8.8 Watts per foot, 36 LEDs per foot

IP65 and IP68 versions are UV resistant

2400K, 2700K, 3000K, 3500K, 4100K, and 6000K

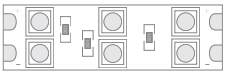
Cuttable every 1.97 inches

## DIMENSIONS

8.8 - 24 Volt

LED on center: 0.67 Inches / 17 mm

Height: 0.09 Inches / 2.3 mm



Width: 0.59 Inches / 15 mm

Length between cuttable points: 1.97 Inches / 50 mm

## PART NUMBER BUILDER

| Category | | Waterproof | | Voltage | | Wattage | | Color Temperature | | |
|---|---|---|---|---|---|---|---|---|---|---|
| RB | + | | + | 24 | + | 8.8 | + | | = | Your Part Number<br>Example: RB248.827 |

65 - IP65
68 - IP68
Blank - None (IP40)

24 - 2400K
27 - 2700K
30 - 3000K
35 - 3500K
41 - 4100K
60 - 6000K

Rev. 2013.08.08

## SPECIFICATIONS **RIBBONLYTE 8.8**

| | |
|---|---|
| Operating Voltage | 24 Volt |
| Power Consumption | 8.8 Watts / Linear Foot |
| Milliamperes | 367 mA / Foot |
| Protection Rating | IP40/IP65/IP68 |
| Dimming | Triac / 0-10 Volt / DMX / Lutron A-Series 1% dimming LED drivers |
| Operating Temperature | -40° C to 70° C |
| Color Temperature | 2400K, 2700K, 3000K, 3500K, 4100K and 6000K |
| Lumen Output | 2400K: 596.52 lm/ft; 2700K: 615.96 lm/ft; 3000K: 702.72 lm/ft; 3500K: 644.4 lm/ft; 4100K: 628.92 lm/ft; 6000K: 677.52 lm/ft |
| Binning Tolerance | +/- 100K |
| LED Beam Angle | 160° |
| Lamp Life | 50,000 Hours |
| Cuttable | Every 1.97" (50 mm) |
| CRI * *CRI >90 available upon request | 2400K: >50.5; 2700K: >58.9; 3000K: >63; 3500K: >65.3; 4100K: >70.8; 6000K: >73.4 |
| Lumens per Watt (per ft) | 2400K: 67.79 lm/W; 2700K: 70.00 lm/W; 3000K: 79.85 lm/W; 3500K: 73.23 lm/W; 4100K: 71.47 lm/W; 6000K: 77.00 lm/W |
| Constant Voltage | Yes |
| Max Length Before Additional Power is Needed | 25' 7.1" (7.80 m) |

## DIMENSIONS **RIBBONLYTE 8.8**

### IP40 + IP65

| | | |
|---|---|---|
| Width | | 0.59" / 15 mm |
| Length | | Up to 25' 7.1" / 7.80 m |
| Height | IP40: 0.088" / 2.2 mm | IP65: 0.172" / 4.4 mm |

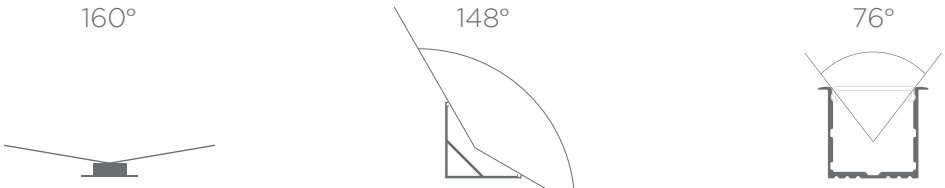
### OUTDOOR - IP68

| | |
|---|---|
| Width | 0.70" / 17.8 mm |
| Length | Up to 25' 7.1" / 7.80 m |
| Height | 0.19" / 4.8 mm |

Rev. 2013.08.08

# RIBBONLYTE 8.8

## SAMPLE **BEAM ANGLES**

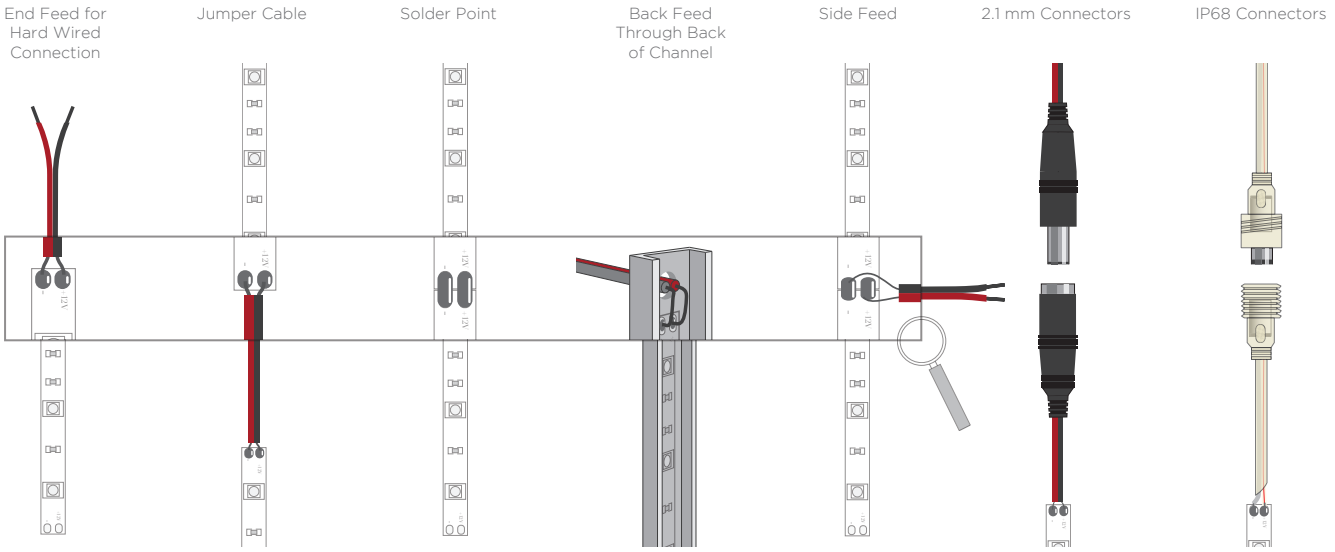



Ribbonlyte

In AC4/AC5 Channel

In W31 Channel

## CONNECTION **OPTIONS**




## CHANNEL **COMPATIBILITY**

| Protection | Compatible Channels |
|---|---|
| Non-Waterproof (IP40) | AC4, AC5, AR3, AS3, AT1, AT2, AT3, AP1, W31, W35, WH35 |
| IP65 | AC4, AC5, AR3, AS3, AT1, AT2, AT3, AP1, W31, W35, WH35 |
| IP68 | AC4, AC5, AR3, AS3, W31, W35, WH35 |

Rev. 2013.08.08

## USAGE **GUIDELINES**

Compatible with a wide variety of control products including the entire line of Lutron dimming systems.

For use with Acolyte drivers, triac dimming modules, 0-10 modules and interface controllers (DMXINF models).

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|---|---|---|---|---|---|---|---|
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| Power Consumption | 1.5 W / Ft | 2.2 W / Ft | 3.0 W / Ft | 4.4 W / Ft | 5.0 W / Ft | 6.0 W / Ft | 8.8 W / Ft |
| Current (mA) - 12 V | 125 | 183 | 250 | 366 | 417 | 500 | -- |
| Current (mA) - 24 V | 63 | 92 | 125 | 183 | 208 | 250 | 367 |
| Protection Rating | IP45, IP65 and IP68 | | | | | | |
| Beam Angle | 160° | | | | | | |
| Color Temperatures | 2400K, 2700K, 3000K, 3500K, 4100K, 6000K (5.0 is only avail. in 3000K, 4100K, 6000K) | | | | | | |
| LED's / Foot | 18 | 9 | 36 | 18 | 15 | 72 | 36 |
| Width - IP45 / IP65 | 0.31" | 0.39" | 0.31" | 0.39" | 0.41" | 0.50" | 0.59" |
| Width - IP68 | 0.41" | 0.52" | 0.41" | 0.52" | 0.54" | 0.66" | 0.70" |
| Cuttable Length - 12 V | 1.97" | 3.94" | 0.98" | 1.97" | 2.46" | 1.97" | -- |
| Cuttable Length - 24 V | 3.94" | 6.55" | 1.97" | 3.94" | 4.92" | 3.94" | 1.97" |
| Max Length - 12 V | 29' 4.6" | 26' 3" | 19' 8.2" | 16' 4.9" | 16' 4.9" | 16' 4.9" | -- |
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| Lumen / Ft - 3000 K | 82.80 | 175.68 | 165.60 | 351.36 | 438.91 | 331.20 | 702.72 |
| Lumen / Ft - 3500 K | 96.84 | 161.10 | 193.68 | 322.20 | -- | 387.36 | 644.40 |
| Lumen / Ft - 4100 K | 85.68 | 157.23 | 171.36 | 314.46 | 441.96 | 342.72 | 628.92 |
| Lumen / Ft - 6000 K | 89.64 | 169.38 | 179.28 | 338.76 | 445.01 | 358.56 | 677.52 |
| Lumens / Watt - 2400 K | 61.91 | 67.79 | 61.91 | 67.79 | -- | 61.91 | 67.69 |
| Lumens / Watt - 2700 K | 53.64 | 70.00 | 53.64 | 70.00 | -- | 53.64 | 70.00 |
| Lumens / Watt - 3000 K | 55.2 | 79.85 | 55.2 | 79.85 | 87.78 | 55.20 | 79.85 |
| Lumens / Watt - 3500 K | 64.56 | 73.23 | 64.56 | 73.23 | -- | 64.56 | 73.23 |
| Lumens / Watt - 4100 K | 57.12 | 71.47 | 57.12 | 71.47 | 88.39 | 57.12 | 71.47 |
| Lumens / Watt - 6000 K | 59.76 | 77.00 | 59.76 | 77.00 | 89.00 | 59.76 | 77.00 |
| CRI - 2400 K | 50.4 | 50.5 | 50.4 | 50.5 | -- | 50.4 | 50.5 |
| CRI - 2700 K | 56.0 | 58.9 | 56.0 | 58.9 | -- | 56.0 | 58.9 |
| CRI - 3000 K | 62.8 | 63.0 | 62.8 | 63.0 | 72.0 | 62.8 | 63.0 |
| CRI - 3500 K | 66.3 | 65.3 | 66.3 | 65.3 | -- | 66.3 | 65.3 |
| CRI - 4100 K | 69.2 | 70.8 | 69.2 | 70.8 | 70.0 | 69.2 | 70.8 |
| CRI - 6000 K | 73.8 | 73.4 | 73.8 | 73.4 | 69.0 | 73.8 | 73.4 |

Rev. 2013.08.08

# SPECIFICATION SHEET

**lumenfacade™**

**INTERIOR**
**WHITE & STATIC COLORS**

Client: _____

Project name: _____

Order #: _____

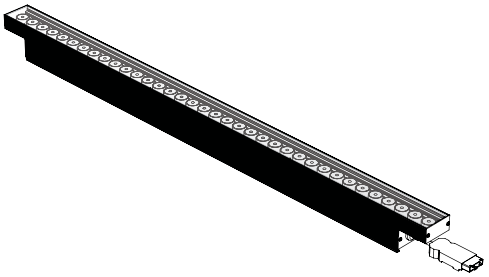
Type: _____ Qty: _____

L5

## FEATURES AND BENEFITS

### Physical :

- Low copper content extruded aluminum housing
- Available in 1', 2', 3' or 4' sections
- Electro-statically applied polyester powder coat finish
- Aluminum end caps
- Stainless steel hardware
- Clear acrylic lens
- 10° x 10°, 10° x 60°, 30° x 60° or 60° x 60° optics
- Interior applications only



### Performance :

- Minimum 1fc (10.7 lux) @ 114.7 feet (34.9m) distance (4000K, 10° x 60° optic, HO version)
- 2,455 delivered lumens and 13,172 candelas at nadir (4000K, 4' unit, 10° x 60° optic, HO version)
- CRI values: 85+ (2700K), 80+ (3000K), 78+ (4000K)
- Lumen maintenance 120,000 hrs [L70 @ 25°C]
- Lumen measurements comply with LM - 79 - 08 standard
- Resolution per foot or per fixture (see page 5)
- Operating temperatures: -25° C to 50° C [-13F to 122F]

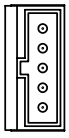
### Electrical :

- Line voltage luminaire for 100 to 277 volts
- Power and data in 1 cable (#16)
- Up to 88 feet with a single 120V power feed, HO version
- 5W/ft version meets ASHRAE standards for linear lighting on building facades
- 8.5W/ft (15.25W/ft HO version)
- Dimming options: 0-10 volt, DMX, DALI, Lumentalk, or Lutron® EcoSystem® enabled

c UL us CE RoHS

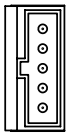
lumentalk EcoSystem Enabled

Wiring detail

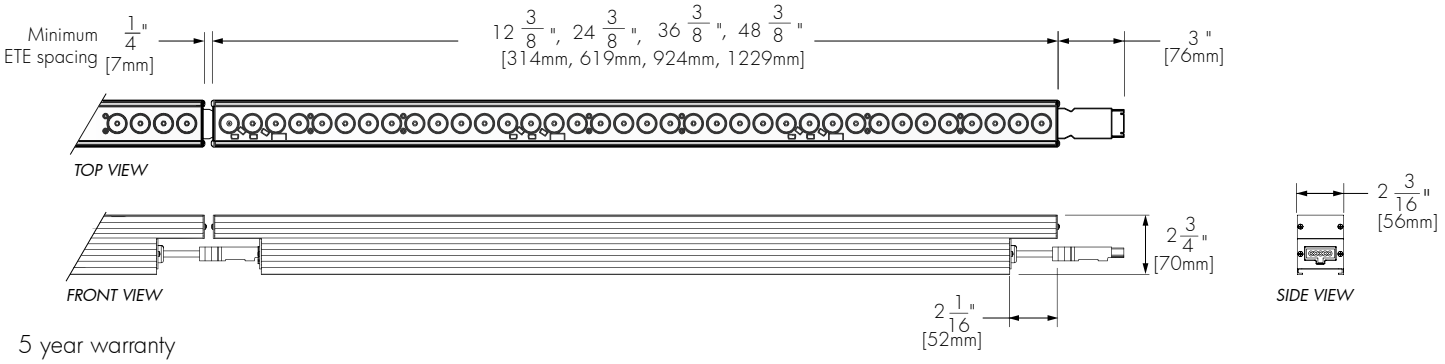


| PIN ID / | WIRE COLOR / | USE |
|---|---|---|
| (N) | WHITE | NEUTRAL |
| (⏚) | GREEN | GROUND |
| (1) | BLACK | LIVE 120-277V |
| (2) | ORANGE | 0-10V / DATA- |
| (3) | RED | 0-10V / DATA+ |

CE Wiring detail



| PIN ID / | WIRE COLOR / | USE |
|---|---|---|
| (N) | BLUE | NEUTRAL |
| (⏚) | GREEN/YELLOW | GROUND |
| (1) | BROWN | LIVE 120-277V |
| (2) | GRAY | 0-10V / DATA- |
| (3) | BLACK | 0-10V / DATA+ |




5 year warranty



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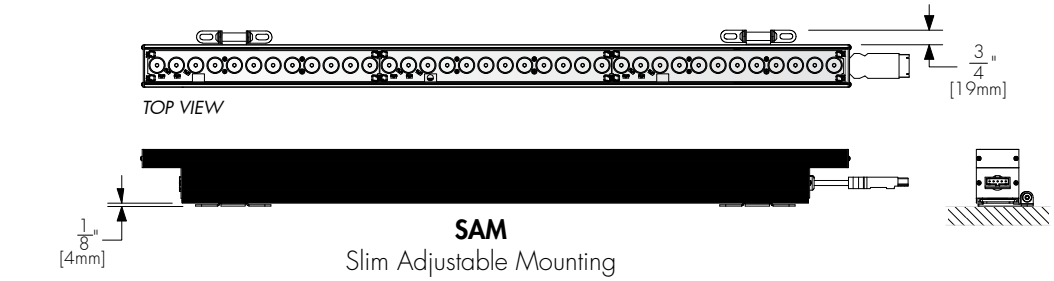
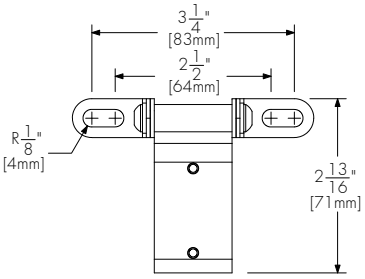
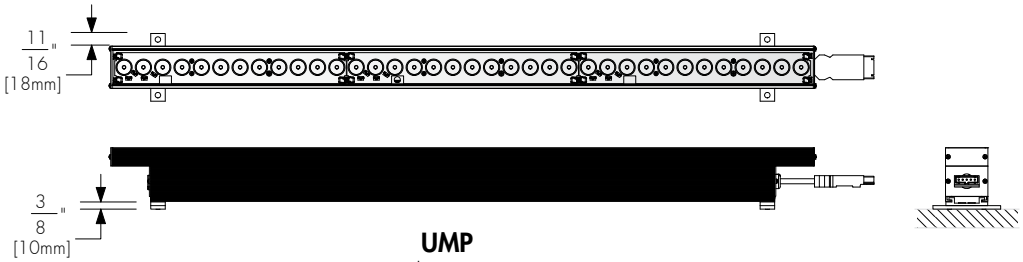
## MOUNTING OPTIONS



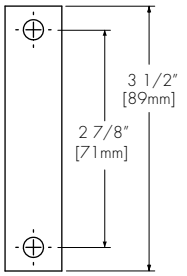

**SAM**
Slim Adjustable Mounting



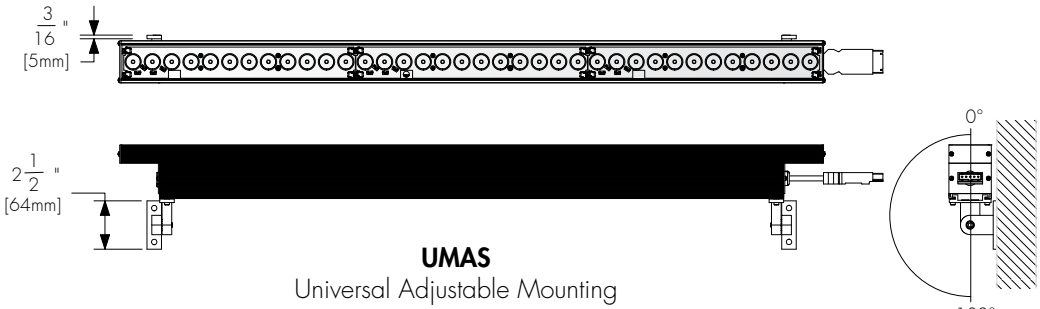

**SAM**
Mounting Hole Pattern



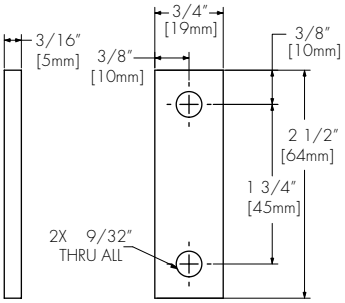

**UMP**
Fixed Mounting



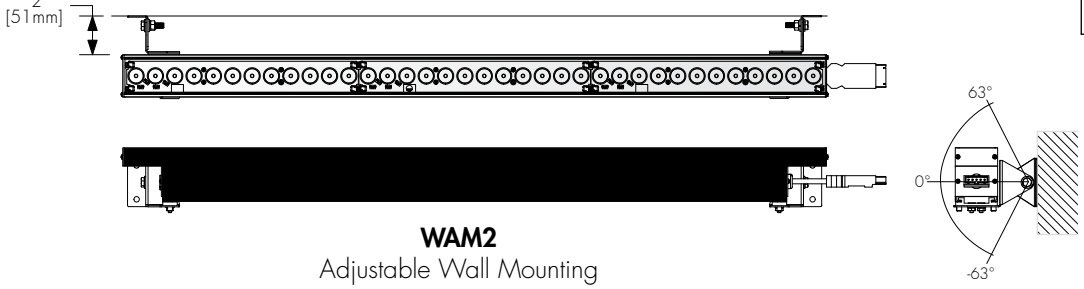

**UMP**
Mounting Hole Pattern



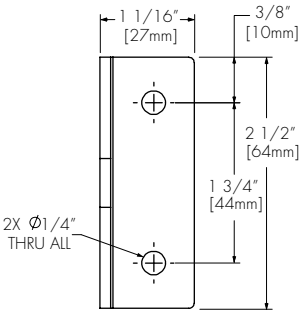

**UMAS**
Universal Adjustable Mounting



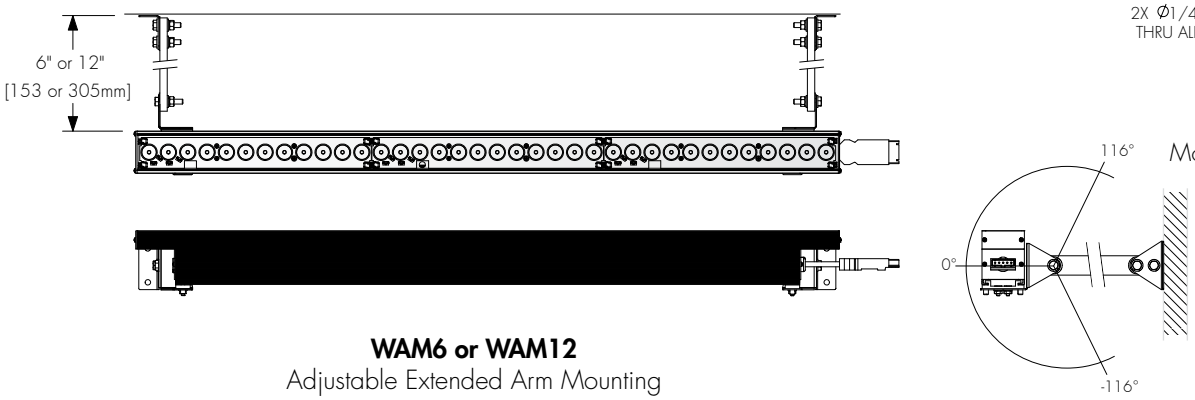

**UMAS**
Mounting Hole Pattern




**WAM2**
Adjustable Wall Mounting




**WAM**
Mounting Hole Pattern




**WAM6 or WAM12**
Adjustable Extended Arm Mounting

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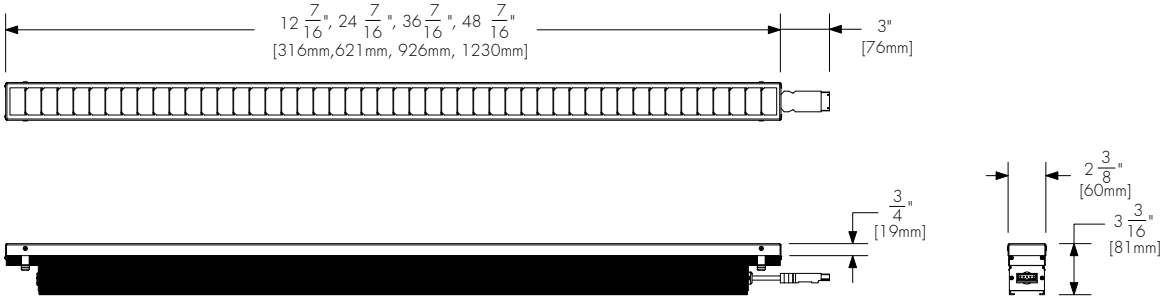
## LOUVER ACCESSORY INSTALLATION DETAIL




**LOGiRD**
Radial Louver for Lumenfacade Interior
(see page 4 for ordering code)



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## ACCESSORIES

Order separately

### Control Systems:

**LTO2** Lumentouch 2.0 is a wall mount DMX 512 controller keypad

**LCU** Lumencue is a USB / mini SD DMX 512 controller

**LID** LumenID is a diagnostic and addressing DMX 512 controller.
It must be specified on all DMX applications.
Refer to LID specification sheet for details.

**LTN** Lumentone is a simple pre-programmed DMX 512 controller
with a push button rotary dial and live feedback.

### CBOX :

**iCBOX-___V-___-___** Interior DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to iCBOX specification sheet for details.

**CBOX-___V-___-___** DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to CBOX specification sheet for details.

### Leader Cable :

**LOGiLCD___** Leader Cable for Lumenfacade interior.
Please add desired cable length : 10, 25 or 50 feet
Sealing endcap is mandatory for any unused connector.
(1) included with every leader cable

### Jumper Cable :

**LOGiJCD___** Jumper Cable for Lumenfacade interior.
Please add desired cable length : 1, 2, 4, 8, 10, 15 or 20 feet

### Radial Louver :

**LOGiRD___-___** Radial louver for Lumenfacade.

1. Please specify desired nominal length: 1', 2', 3' or 4'.
2. Please specify finish as BK - Black SandText
   (Custom color available on request, please specify as CC together with RAL color : _____)



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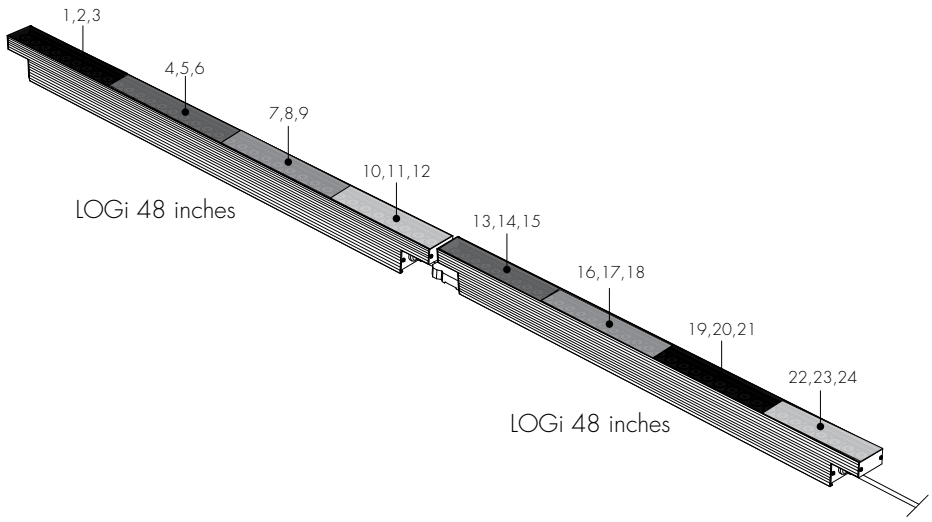
## RESOLUTION DETAILS
## APPLICABLE FOR DMX DIMMING OPTION ONLY

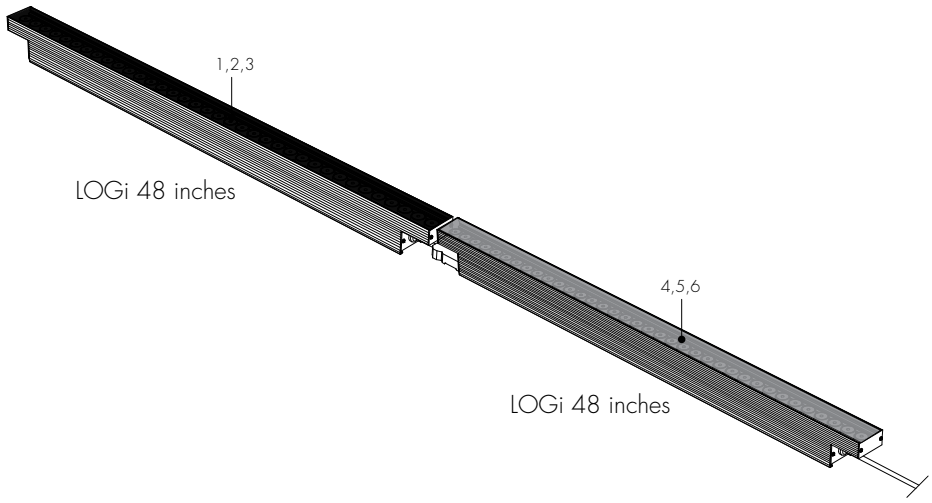
**DMX 1FT** - Resolution per foot: each foot is addressed independently (recommended for most installations)
1% minimum dimming value

DMX ADDRESSES:




**DMX 1FX** - Resolution per fixture: each fixture is addressed independently
1% minimum dimming value

DMX ADDRESSES:




*Warning: resolution is a factory setting and cannot be changed in the field.



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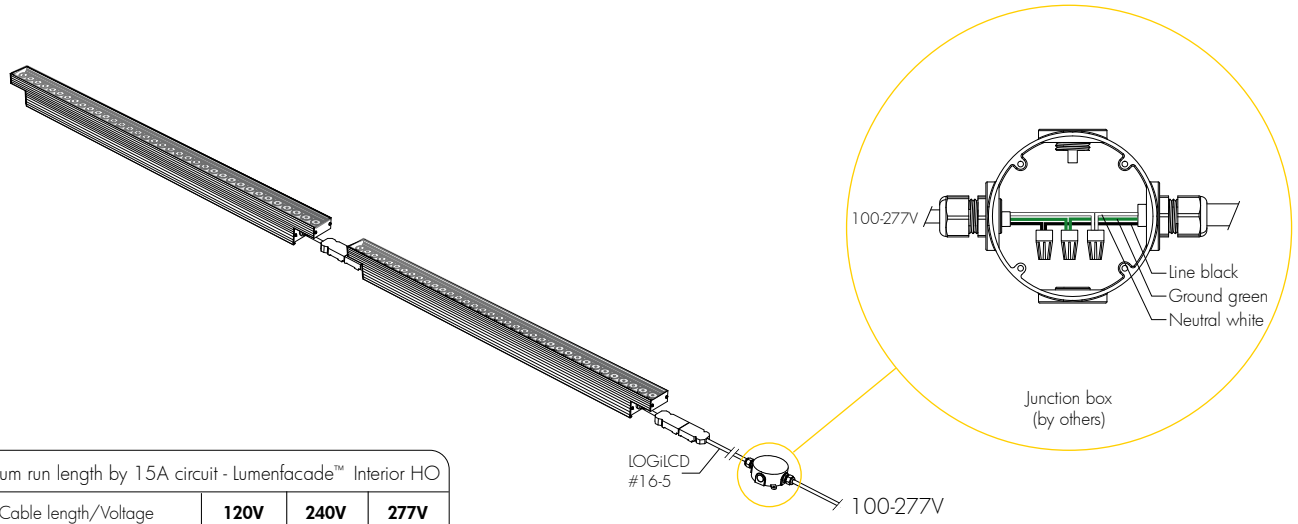
## TYPICAL WIRING DIAGRAMS

### Non-Dimming or Lumentalk Dimming Version

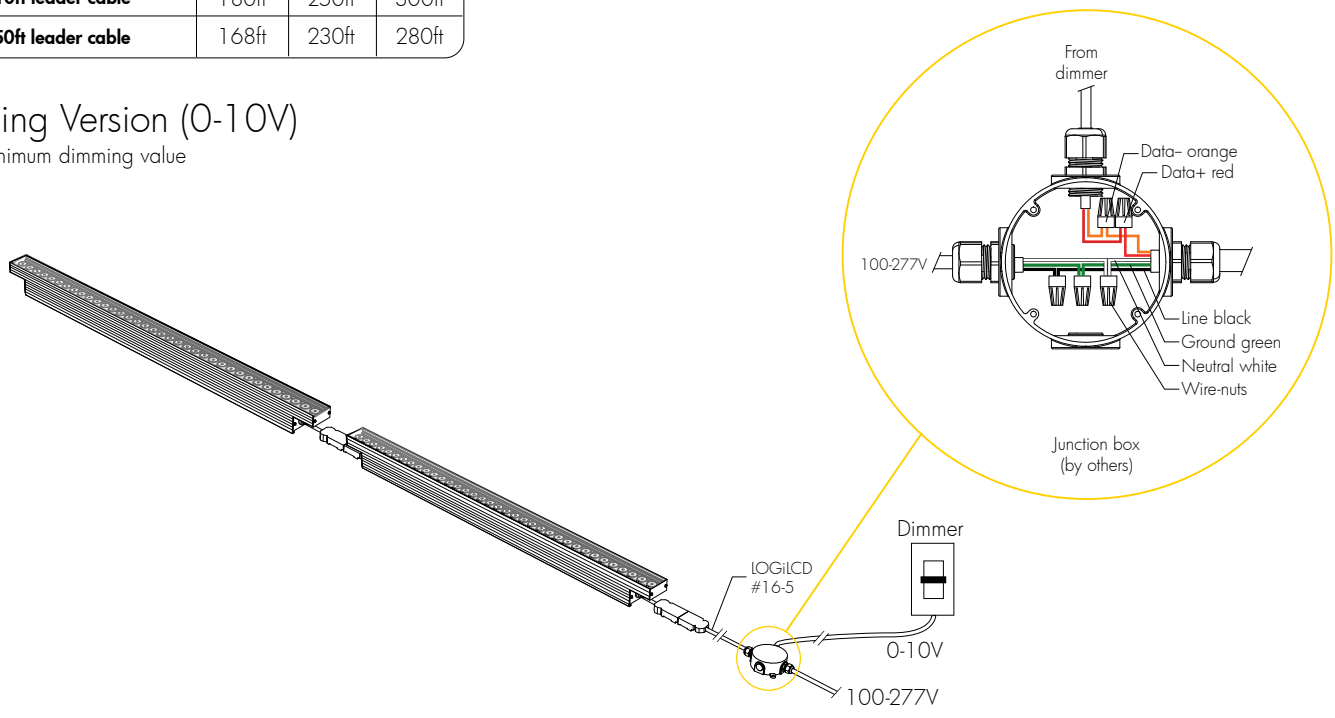



| Maximum run length by 15A circuit - Lumenfacade™ Interior HO | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 88ft | 100ft | 112ft |
| **50ft leader cable** | 68ft | 76ft | 84ft |
| Maximum run length by 15A circuit - Lumenfacade™ Interior RO | | | |
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 148ft | 168ft | 184ft |
| **50ft leader cable** | 120ft | 132ft | 148ft |

| ASHRAE Code Compliant - Lumenfacade™ 5W/ft<br>Maximum run length by 15A circuit | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 180ft | 250ft | 300ft |
| **50ft leader cable** | 168ft | 230ft | 280ft |

### Dimming Version (0-10V)

10% minimum dimming value







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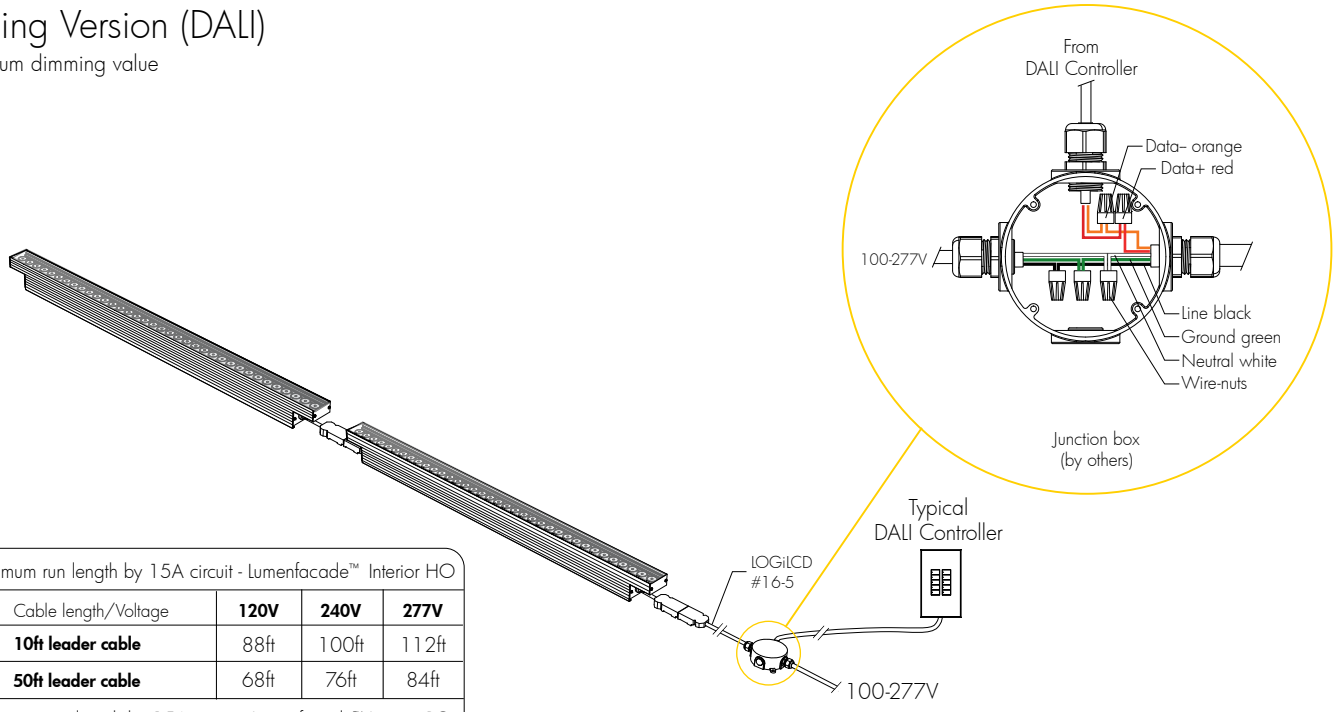
## TYPICAL WIRING DIAGRAMS - continued

### Dimming Version (DALI)

1% minimum dimming value



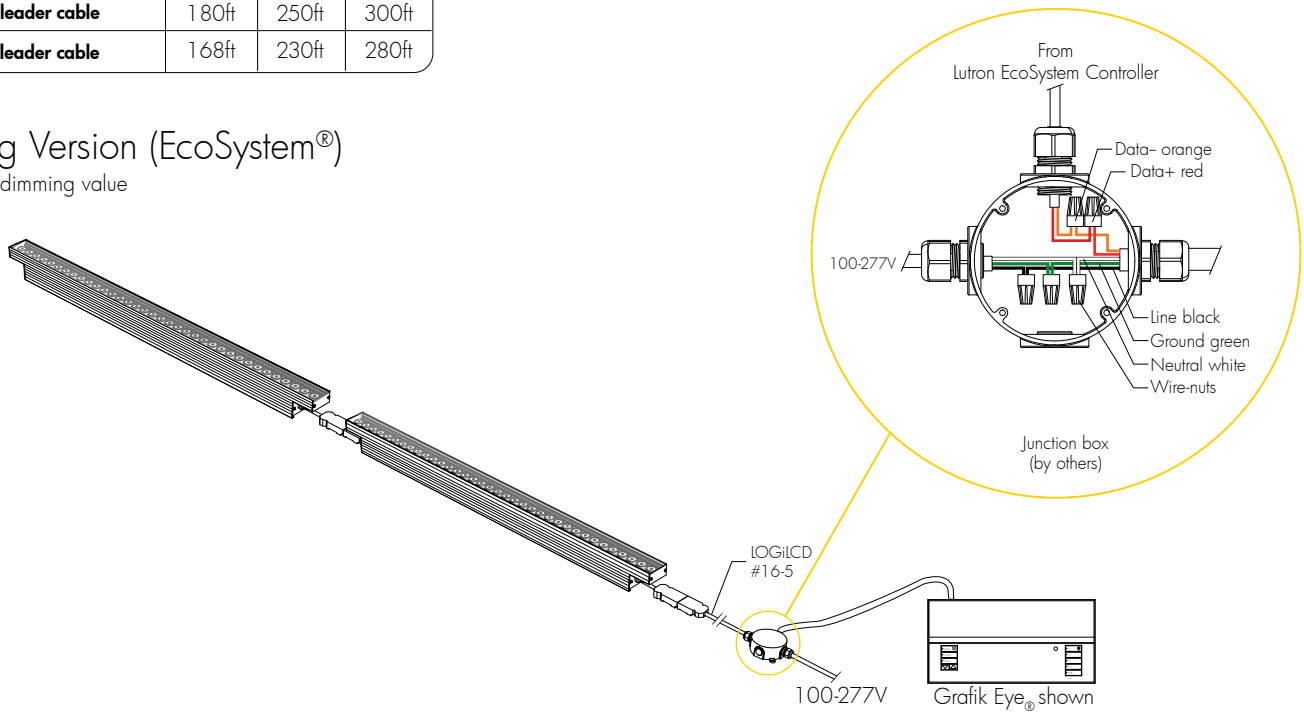

| Maximum run length by 15A circuit - Lumenfacade™ Interior HO | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 88ft | 100ft | 112ft |
| **50ft leader cable** | 68ft | 76ft | 84ft |

| Maximum run length by 15A circuit - Lumenfacade™ Interior RO | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 148ft | 168ft | 184ft |
| **50ft leader cable** | 120ft | 132ft | 148ft |

| ASHRAE Code Compliant - Lumenfacade™ 5W/ft<br>Maximum run length by 15A circuit | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 180ft | 250ft | 300ft |
| **50ft leader cable** | 168ft | 230ft | 280ft |

### Dimming Version (EcoSystem®)

1% minimum dimming value







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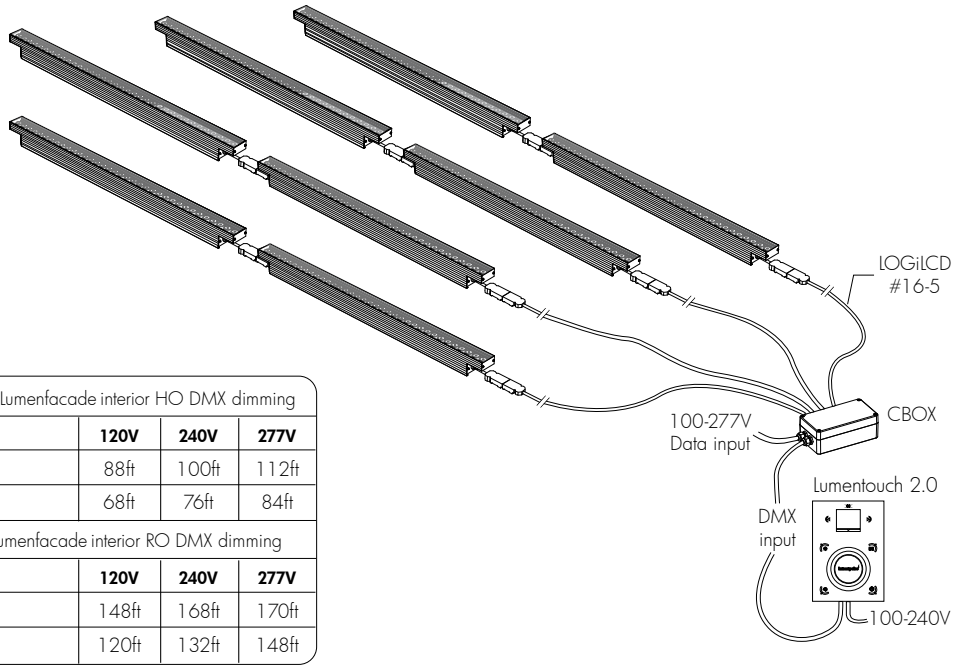
## TYPICAL WIRING DIAGRAMS - continued

### DMX Dimming Version (Star layout)

1% minimum dimming value




| Maximum run length by 15A circuit - Lumenfacade interior HO DMX dimming | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 88ft | 100ft | 112ft |
| **50ft leader cable** | 68ft | 76ft | 84ft |
| Maximum run length by 15A circuit - Lumenfacade interior RO DMX dimming | | | |
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 148ft | 168ft | 170ft |
| **50ft leader cable** | 120ft | 132ft | 148ft |

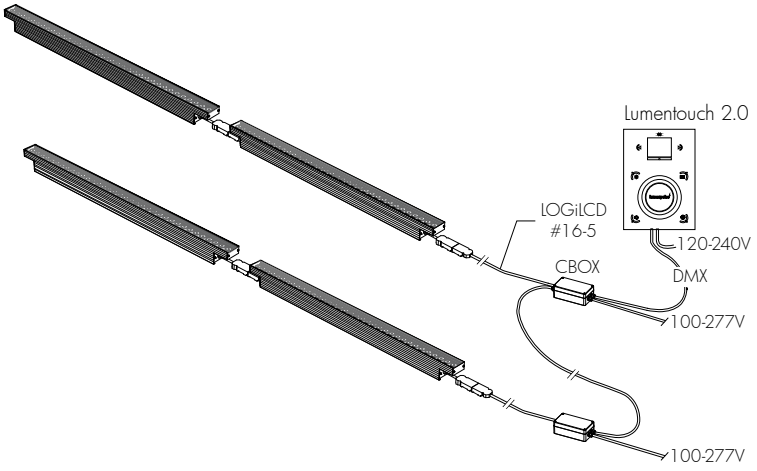
*Up to 170 individually addressable 1 foot sections per DMX run.
Consult factory for specific applications.

| ASHRAE Code Compliant - Lumenfacade™ 5W/ft DMX dimming<br>Maximum run length by 15A circuit | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 170ft | 170ft | 170ft |
| **50ft leader cable** | 168ft | 170ft | 170ft |

*Up to 170 individually addressable 1 foot sections per DMX run.
Consult factory for specific applications.

### DMX Dimming Version (Daisy Chain Layout)

1% minimum dimming value







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## HOW TO ORDER

| LOGi Select: | Select: | Select: | Select: | Select: | Select: | Select: | Select: |
|---|---|---|---|---|---|---|---|
| Housing | Voltage | Length | Colors and color temperatures | Optic | Mounting Option | Finish | Control |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

### 1

### Housing:

**LOGi ASHRAE -** Lumenfacade™ interior, 5W/ft, ASHRAE compliant

**LOGi RO -** Lumenfacade™ interior Regular Output,8.5W/ft

**LOGi HO -** Lumenfacade™ interior High Output, 15.25W/ft

### 2

### Voltage:

**100 -** 100 volts
**120 -** 120 volts
**208 -** 208 volts
**220 -** 220 volts
**240 -** 240 volts
**277 -** 277 volts

### 3

### Length:

**12 -** 12 3/8 inches (314mm) (0.95 kg/2.1 lbs)
**24 -** 24 3/8 inches (619mm) (1.68 kg/3.7 lbs)
**36 -** 36 3/8 inches (924mm) (2.41 kg/5.3 lbs)
**48 -** 48 3/8 inches (1229mm) (3.08 kg/6.8 lbs)

### 4

### Colors and Color temperatures:

**27K -** 2700K
**30K -** 3000K
**35K -** 3500K
**40K -** 4000K
**RD -** Red
**GR -** Green
**BL -** Blue

### 5

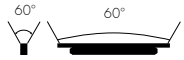
### Optics:

**10x10 -** 10° x 10°
*For best results use with HO fixtures at a 6-inch (15cm) setback from surface. Contact factory for application support.

**10x60 -** 10° x 60°

**30x60 -** 30° x 60°

**60x60 -** 60° x 60°




### 6

### Mounting Option:

**SAM -** Slim Adjustable Mounting
**UMP -** Fixed Mounting
**UMAS -** Universal Adjustable Mounting
**WAM2 -** Adjustable Wall Mounting 2"
**WAM6 -** Adjustable Extended Arm Mounting 6"
**WAM12 -** Adjustable Extended Arm Mounting 12"

### 7

### Finish:

**SI -** Silver SandText
**BK -** Black SandText
**WH -** White
**CC -** Custom (please specify RAL color)

### 8

### Control:

**NO -** No Dimming
**LT -** Lumentalk Dimming (available for 2', 3' and 4' lengths only) (1% minimum dimming value)
**DIM -** 0-10V Dimming option (10% minimum dimming value)
**DMX 1FT -** DMX Dimming option, resolution per foot (1% minimum dimming value)
**DMX 1FX -** DMX Dimming option, resolution per fixture (1% minimum dimming value)
**DALI -** DALI Dimming option (1% minimum dimming value)
**ES -** Lutron® EcoSystem® Enabled Dimming (available for 2', 3' and 4' lengths only) (1% minimum dimming value)

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# SPECIFICATION SHEET

**lumenfacade™**

**INTERIOR**
**WHITE & STATIC COLORS**

Client: _____

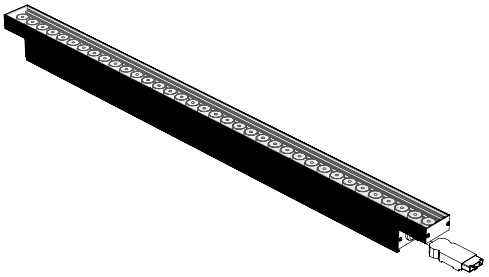
Project name: _____

Order #: _____

Type: _____ Qty: _____

L6

## FEATURES AND BENEFITS



### Physical :

- Low copper content extruded aluminum housing
- Available in 1', 2', 3' or 4' sections
- Electro-statically applied polyester powder coat finish
- Aluminum end caps
- Stainless steel hardware
- Clear acrylic lens
- 10° x 10°, 10° x 60°, 30° x 60° or 60° x 60° optics
- Interior applications only

### Performance :

- Minimum 1fc (10.7 lux) @ 114.7 feet (34.9m) distance (4000K, 10° x 60° optic, HO version)
- 2,455 delivered lumens and 13,172 candelas at nadir (4000K, 4' unit, 10° x 60° optic, HO version)
- CRI values: 85+ (2700K), 80+ (3000K), 78+ (4000K)
- Lumen maintenance 120,000 hrs [L70 @ 25°C]
- Lumen measurements comply with LM - 79 - 08 standard
- Resolution per foot or per fixture (see page 5)
- Operating temperatures: -25° C to 50° C [-13F to 122F]

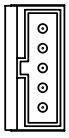
### Electrical :

- Line voltage luminaire for 100 to 277 volts
- Power and data in 1 cable (#16)
- Up to 88 feet with a single 120V power feed, HO version
- 5W/ft version meets ASHRAE standards for linear lighting on building facades
- 8.5W/ft (15.25W/ft HO version)
- Dimming options: 0-10 volt, DMX, DALI, Lumentalk, or Lutron® EcoSystem® enabled

c UL us CE RoHS

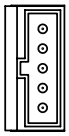
lumentalk EcoSystem Enabled

### Wiring detail

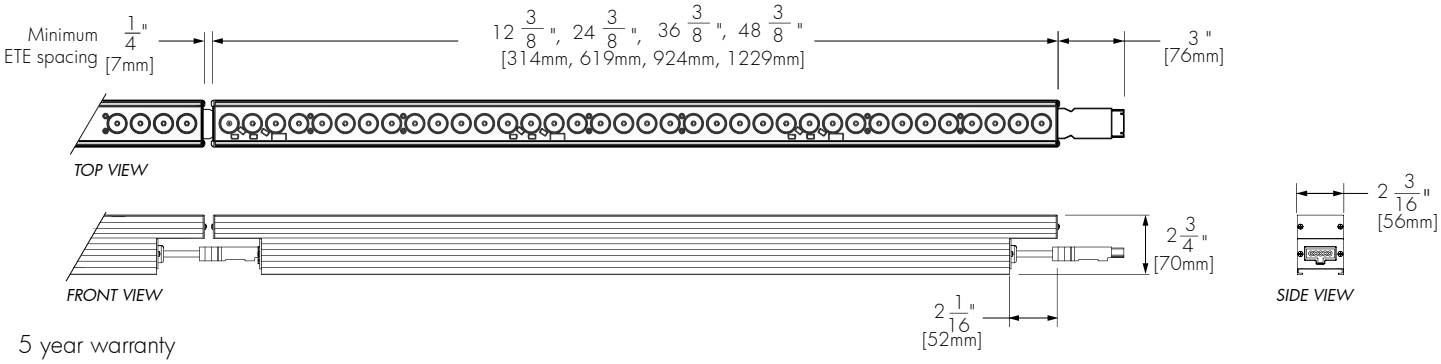


| PIN ID / | WIRE COLOR / | USE |
|---|---|---|
| (N) | WHITE | NEUTRAL |
| (⏚) | GREEN | GROUND |
| (1) | BLACK | LIVE 120-277V |
| (2) | ORANGE | 0-10V / DATA- |
| (3) | RED | 0-10V / DATA+ |

### CE Wiring detail



| PIN ID / | WIRE COLOR / | USE |
|---|---|---|
| (N) | BLUE | NEUTRAL |
| (⏚) | GREEN/YELLOW | GROUND |
| (1) | BROWN | LIVE 120-277V |
| (2) | GRAY | 0-10V / DATA- |
| (3) | BLACK | 0-10V / DATA+ |




5 year warranty



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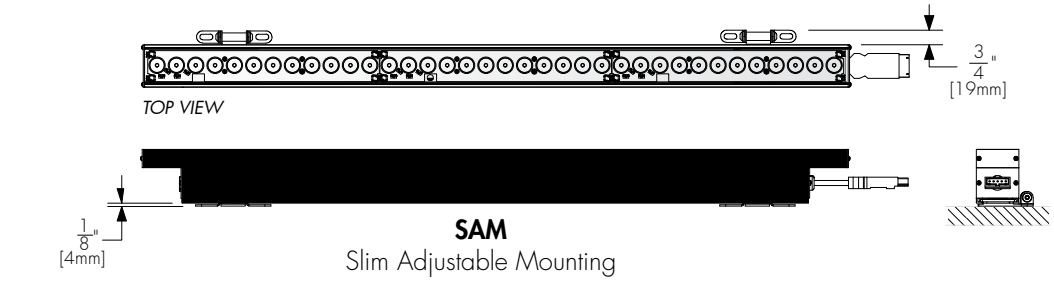
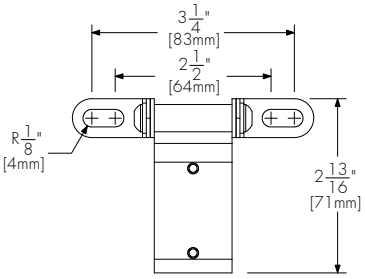
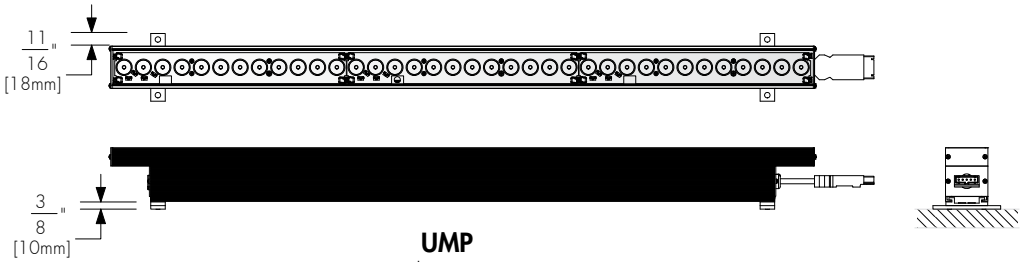
## MOUNTING OPTIONS



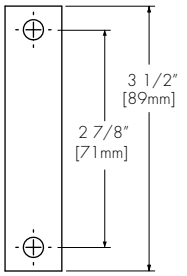

**SAM**
Slim Adjustable Mounting



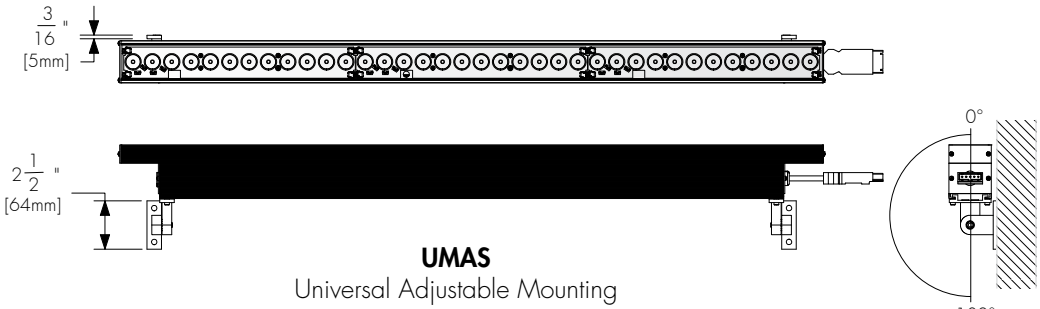

**SAM**
Mounting Hole Pattern



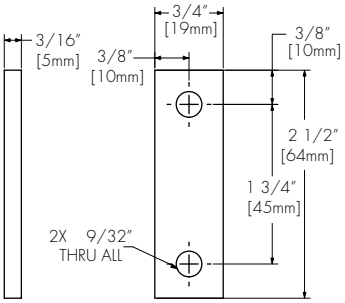

**UMP**
Fixed Mounting



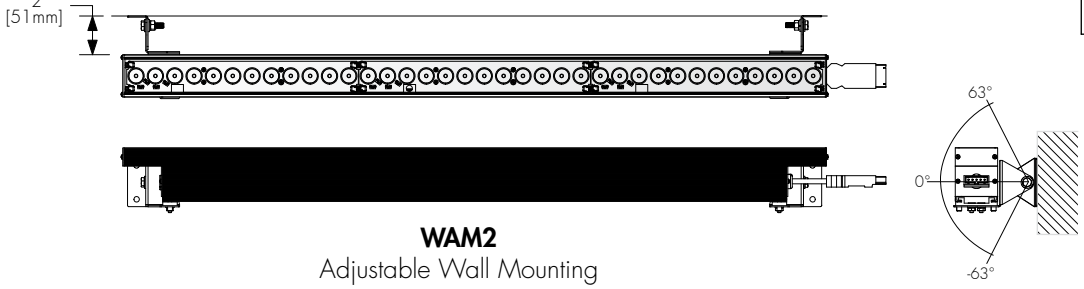

**UMP**
Mounting Hole Pattern



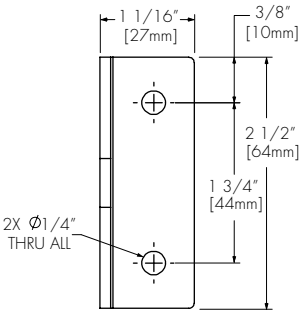

**UMAS**
Universal Adjustable Mounting



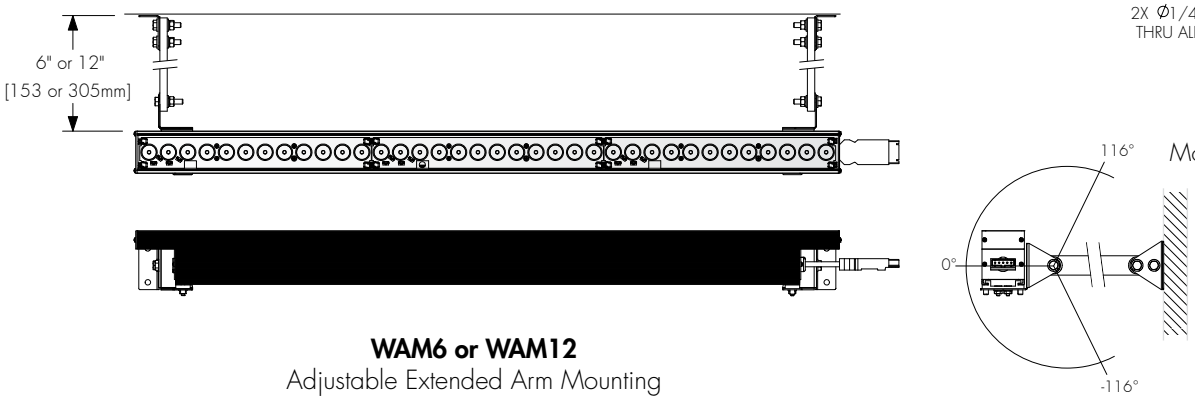

**UMAS**
Mounting Hole Pattern




**WAM2**
Adjustable Wall Mounting




**WAM**
Mounting Hole Pattern




**WAM6 or WAM12**
Adjustable Extended Arm Mounting

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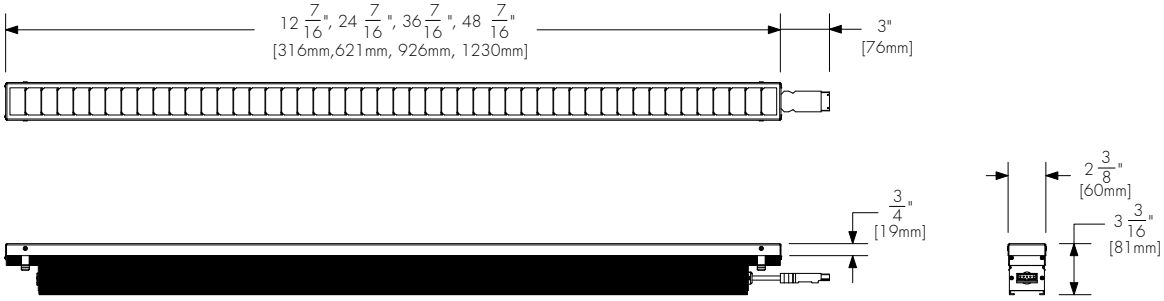
## LOUVER ACCESSORY INSTALLATION DETAIL




**LOGiRD**
Radial Louver for Lumenfacade Interior
(see page 4 for ordering code)



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## ACCESSORIES

Order separately

### Control Systems:

**LTO2** Lumentouch 2.0 is a wall mount DMX 512 controller keypad

**LCU** Lumencue is a USB / mini SD DMX 512 controller

**LID** LumenID is a diagnostic and addressing DMX 512 controller.
It must be specified on all DMX applications.
Refer to LID specification sheet for details.

**LTN** Lumentone is a simple pre-programmed DMX 512 controller
with a push button rotary dial and live feedback.

### CBOX :

**iCBOX-___V-___-___** Interior DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to iCBOX specification sheet for details.

**CBOX-___V-___-___** DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to CBOX specification sheet for details.

### Leader Cable :

**LOGiLCD___** Leader Cable for Lumenfacade interior.
Please add desired cable length : 10, 25 or 50 feet
Sealing endcap is mandatory for any unused connector.
(1) included with every leader cable

### Jumper Cable :

**LOGiJCD___** Jumper Cable for Lumenfacade interior.
Please add desired cable length : 1, 2, 4, 8, 10, 15 or 20 feet

### Radial Louver :

**LOGiRD___-___** Radial louver for Lumenfacade.

1. Please specify desired nominal length: 1', 2', 3' or 4'.
2. Please specify finish as BK - Black SandText
   (Custom color available on request, please specify as CC together with RAL color : _____)



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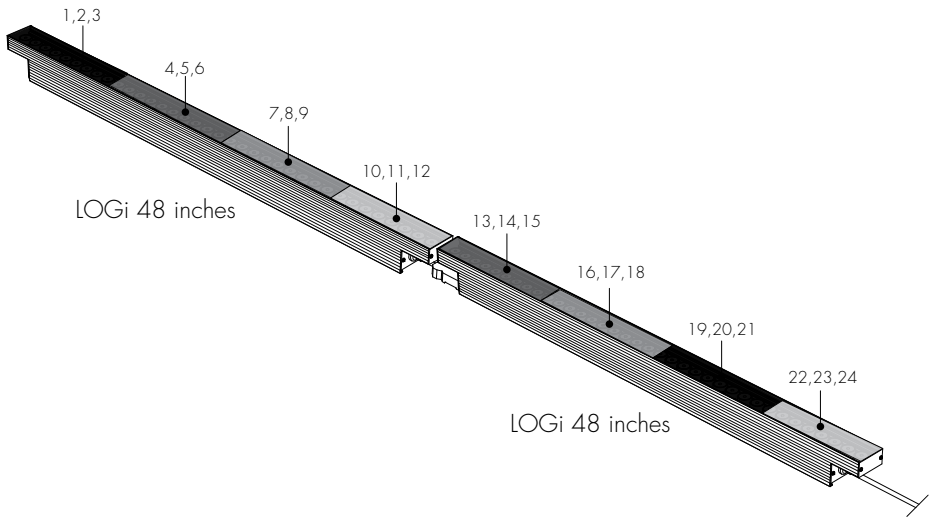
## RESOLUTION DETAILS
## APPLICABLE FOR DMX DIMMING OPTION ONLY

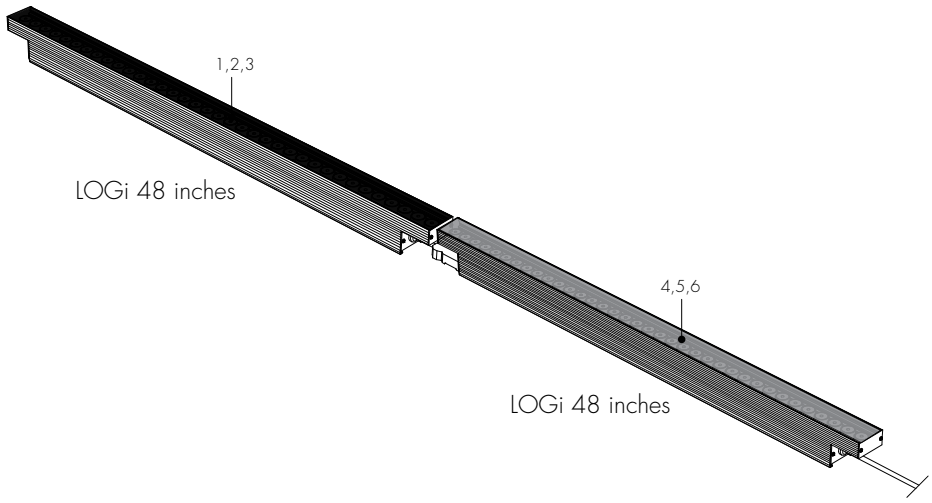
**DMX 1FT** - Resolution per foot: each foot is addressed independently (recommended for most installations)
1% minimum dimming value

DMX ADDRESSES:




**DMX 1FX** - Resolution per fixture: each fixture is addressed independently
1% minimum dimming value

DMX ADDRESSES:




*Warning: resolution is a factory setting and cannot be changed in the field.



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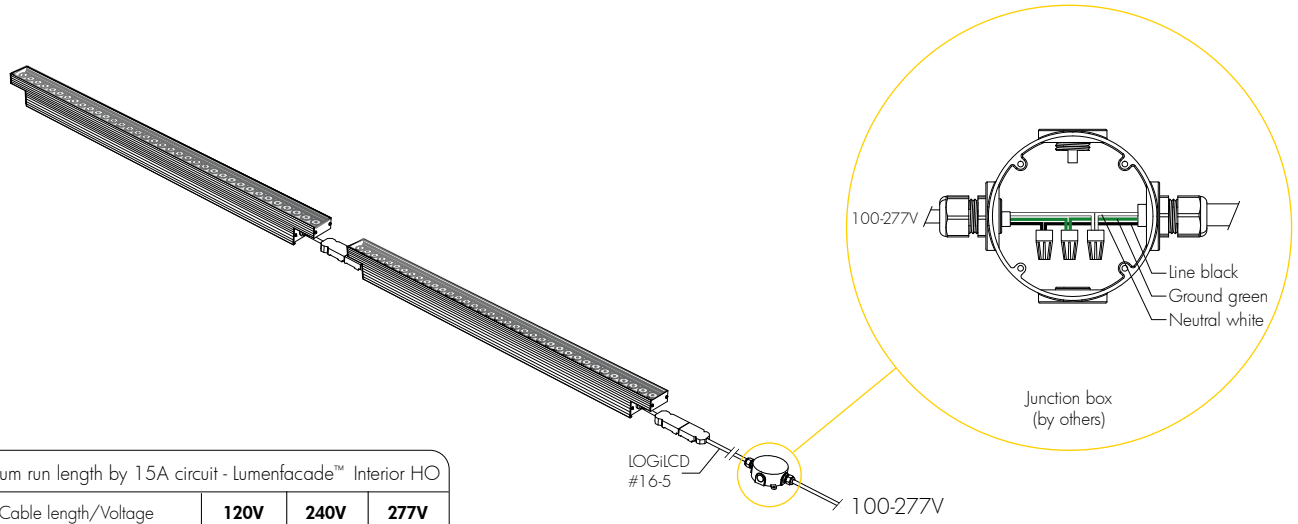
## TYPICAL WIRING DIAGRAMS

### Non-Dimming or Lumentalk Dimming Version

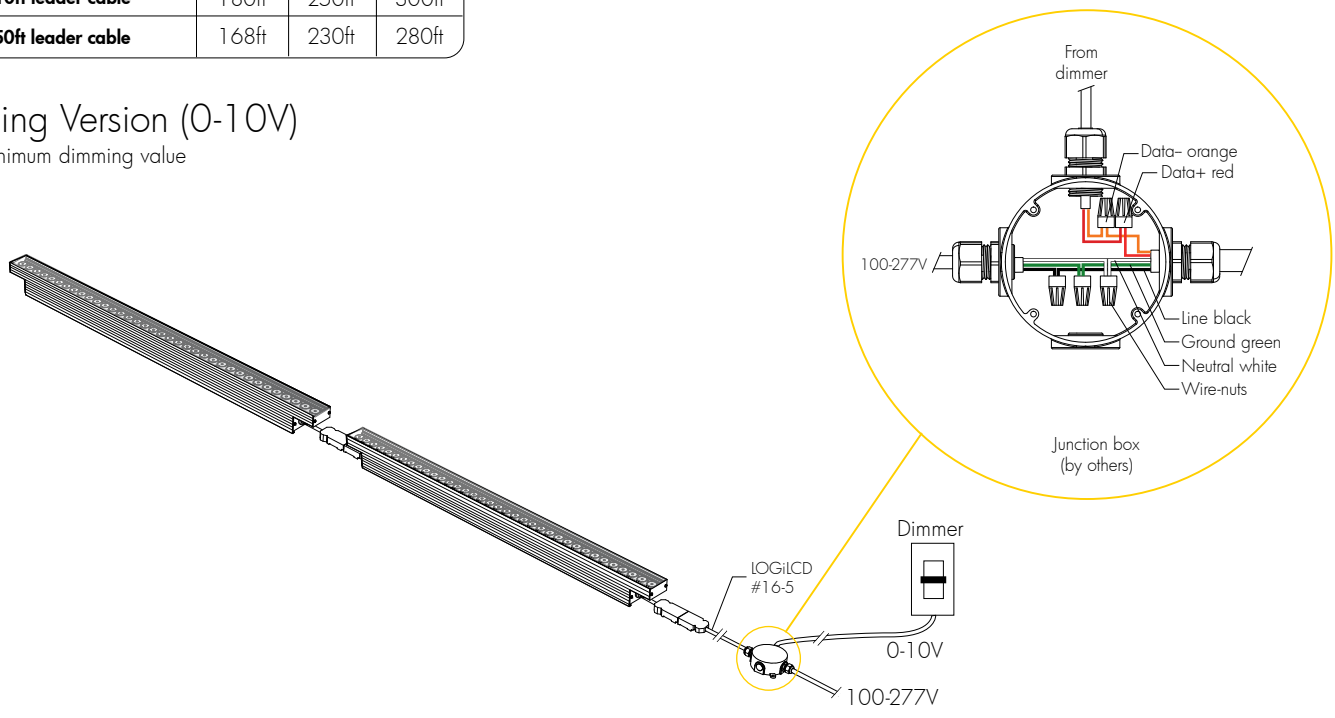



| Maximum run length by 15A circuit - Lumenfacade™ Interior HO | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 88ft | 100ft | 112ft |
| **50ft leader cable** | 68ft | 76ft | 84ft |
| Maximum run length by 15A circuit - Lumenfacade™ Interior RO | | | |
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 148ft | 168ft | 184ft |
| **50ft leader cable** | 120ft | 132ft | 148ft |

| ASHRAE Code Compliant - Lumenfacade™ 5W/ft<br>Maximum run length by 15A circuit | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 180ft | 250ft | 300ft |
| **50ft leader cable** | 168ft | 230ft | 280ft |

### Dimming Version (0-10V)

10% minimum dimming value







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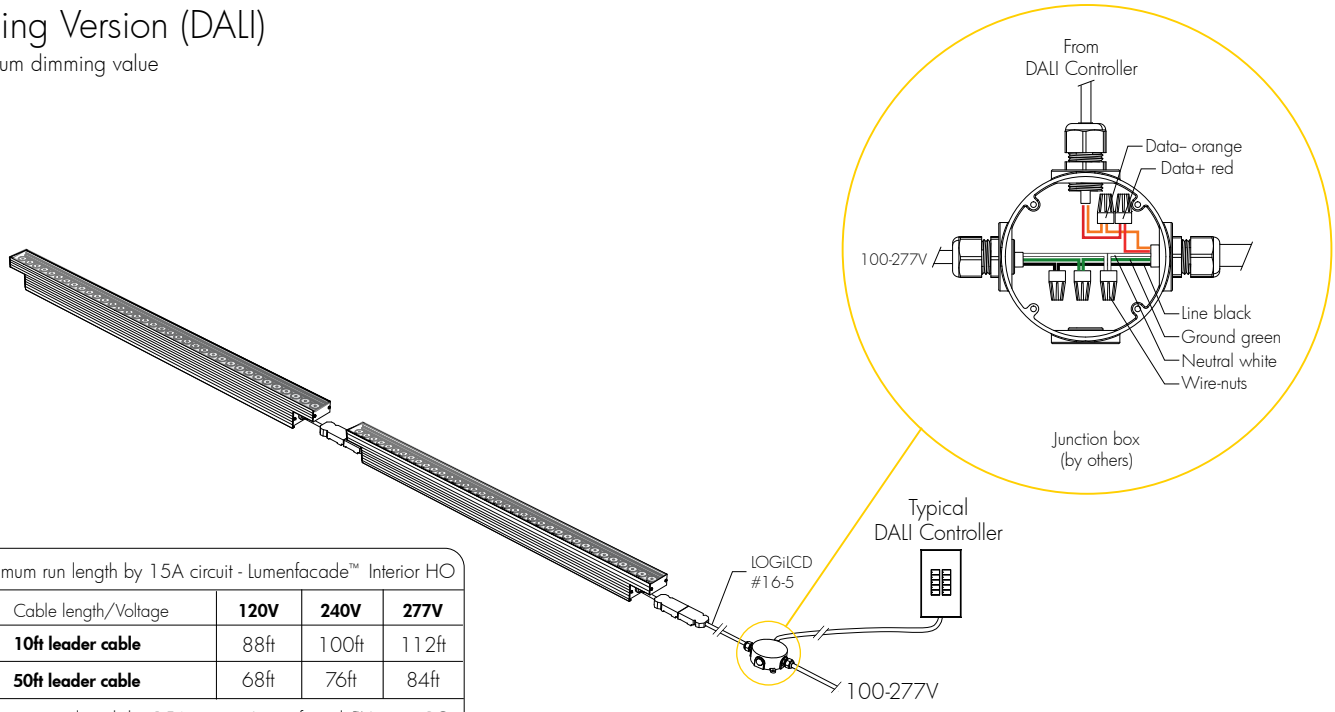
## TYPICAL WIRING DIAGRAMS - continued

### Dimming Version (DALI)

1% minimum dimming value



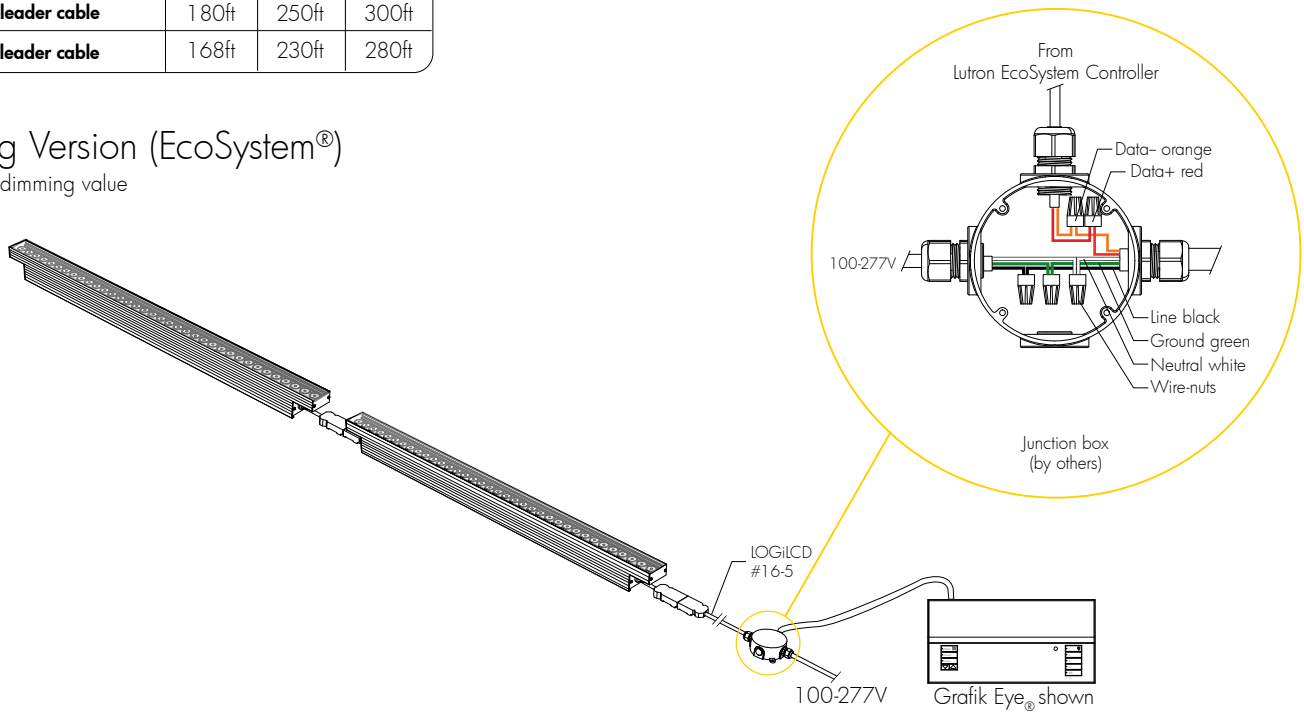

| Maximum run length by 15A circuit - Lumenfacade™ Interior HO | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 88ft | 100ft | 112ft |
| **50ft leader cable** | 68ft | 76ft | 84ft |

| Maximum run length by 15A circuit - Lumenfacade™ Interior RO | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 148ft | 168ft | 184ft |
| **50ft leader cable** | 120ft | 132ft | 148ft |

| ASHRAE Code Compliant - Lumenfacade™ 5W/ft<br>Maximum run length by 15A circuit | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 180ft | 250ft | 300ft |
| **50ft leader cable** | 168ft | 230ft | 280ft |

### Dimming Version (EcoSystem®)

1% minimum dimming value







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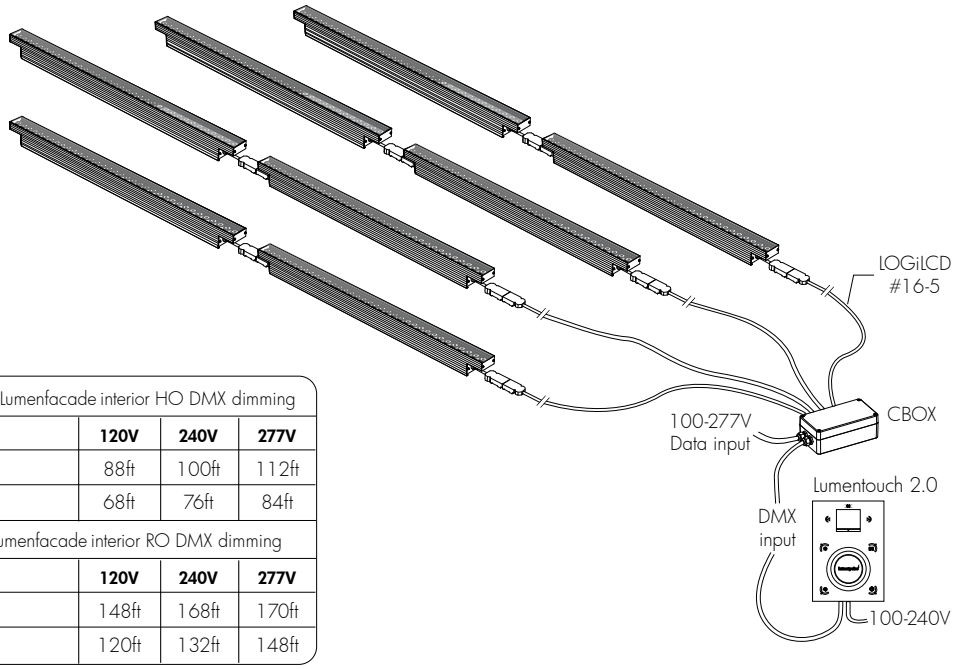
## TYPICAL WIRING DIAGRAMS - continued

### DMX Dimming Version (Star layout)

1% minimum dimming value




| Maximum run length by 15A circuit - Lumenfacade interior HO DMX dimming | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 88ft | 100ft | 112ft |
| **50ft leader cable** | 68ft | 76ft | 84ft |
| Maximum run length by 15A circuit - Lumenfacade interior RO DMX dimming | | | |
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 148ft | 168ft | 170ft |
| **50ft leader cable** | 120ft | 132ft | 148ft |

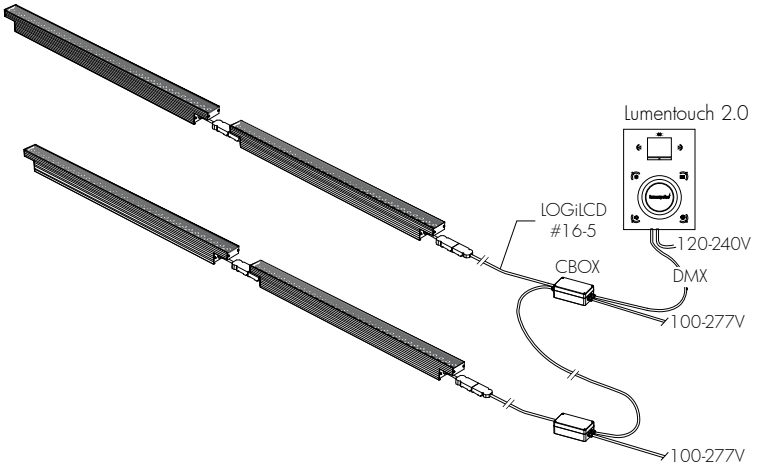
*Up to 170 individually addressable 1 foot sections per DMX run.
Consult factory for specific applications.

| ASHRAE Code Compliant - Lumenfacade™ 5W/ft DMX dimming<br>Maximum run length by 15A circuit | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 170ft | 170ft | 170ft |
| **50ft leader cable** | 168ft | 170ft | 170ft |

*Up to 170 individually addressable 1 foot sections per DMX run.
Consult factory for specific applications.

### DMX Dimming Version (Daisy Chain Layout)

1% minimum dimming value







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## HOW TO ORDER

| LOGi Select: | Select: | Select: | Select: | Select: | Select: | Select: | Select: |
|---|---|---|---|---|---|---|---|
| Housing | Voltage | Length | Colors and color temperatures | Optic | Mounting Option | Finish | Control |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

### 1

### Housing:

**LOGi ASHRAE -** Lumenfacade™ interior, 5W/ft, ASHRAE compliant

**LOGi RO -** Lumenfacade™ interior Regular Output,8.5W/ft

**LOGi HO -** Lumenfacade™ interior High Output, 15.25W/ft

### 2

### Voltage:

**100 -** 100 volts
**120 -** 120 volts
**208 -** 208 volts
**220 -** 220 volts
**240 -** 240 volts
**277 -** 277 volts

### 3

### Length:

**12 -** 12 3/8 inches (314mm) (0.95 kg/2.1 lbs)
**24 -** 24 3/8 inches (619mm) (1.68 kg/3.7 lbs)
**36 -** 36 3/8 inches (924mm) (2.41 kg/5.3 lbs)
**48 -** 48 3/8 inches (1229mm) (3.08 kg/6.8 lbs)

### 4

### Colors and Color temperatures:

**27K -** 2700K
**30K -** 3000K
**35K -** 3500K
**40K -** 4000K
**RD -** Red
**GR -** Green
**BL -** Blue

### 5

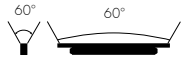
### Optics:

**10x10 -** 10° x 10°
*For best results use with HO fixtures at a 6-inch (15cm) setback from surface. Contact factory for application support.

**10x60 -** 10° x 60°

**30x60 -** 30° x 60°

**60x60 -** 60° x 60°




### 6

### Mounting Option:

**SAM -** Slim Adjustable Mounting
**UMP -** Fixed Mounting
**UMAS -** Universal Adjustable Mounting
**WAM2 -** Adjustable Wall Mounting 2"
**WAM6 -** Adjustable Extended Arm Mounting 6"
**WAM12 -** Adjustable Extended Arm Mounting 12"

### 7

### Finish:

**SI -** Silver SandText
**BK -** Black SandText
**WH -** White
**CC -** Custom (please specify RAL color)

### 8

### Control:

**NO -** No Dimming
**LT -** Lumentalk Dimming (available for 2', 3' and 4' lengths only) (1% minimum dimming value)
**DIM -** 0-10V Dimming option (10% minimum dimming value)
**DMX 1FT -** DMX Dimming option, resolution per foot (1% minimum dimming value)
**DMX 1FX -** DMX Dimming option, resolution per fixture (1% minimum dimming value)
**DALI -** DALI Dimming option (1% minimum dimming value)
**ES -** Lutron® EcoSystem® Enabled Dimming (available for 2', 3' and 4' lengths only) (1% minimum dimming value)

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# SPECIFICATION SHEET

**lumenfacade™**

**INTERIOR**
**WHITE & STATIC COLORS**

Client: _____

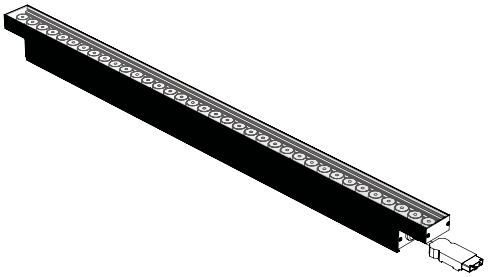
Project name: _____

Order #: _____

Type: _____ Qty: _____

L7

## FEATURES AND BENEFITS



### Physical :

- Low copper content extruded aluminum housing
- Available in 1', 2', 3' or 4' sections
- Electro-statically applied polyester powder coat finish
- Aluminum end caps
- Stainless steel hardware
- Clear acrylic lens
- 10° x 10°, 10° x 60°, 30° x 60° or 60° x 60° optics
- Interior applications only

### Performance :

- Minimum 1fc (10.7 lux) @ 114.7 feet (34.9m) distance (4000K, 10° x 60° optic, HO version)
- 2,455 delivered lumens and 13,172 candelas at nadir (4000K, 4' unit, 10° x 60° optic, HO version)
- CRI values: 85+ (2700K), 80+ (3000K), 78+ (4000K)
- Lumen maintenance 120,000 hrs [L70 @ 25°C]
- Lumen measurements comply with LM - 79 - 08 standard
- Resolution per foot or per fixture (see page 5)
- Operating temperatures: -25° C to 50° C [-13F to 122F]

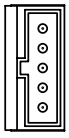
### Electrical :

- Line voltage luminaire for 100 to 277 volts
- Power and data in 1 cable (#16)
- Up to 88 feet with a single 120V power feed, HO version
- 5W/ft version meets ASHRAE standards for linear lighting on building facades
- 8.5W/ft (15.25W/ft HO version)
- Dimming options: 0-10 volt, DMX, DALI, Lumentalk, or Lutron® EcoSystem® enabled

c UL us CE RoHS

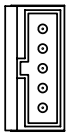
lumentalk EcoSystem Enabled

### Wiring detail

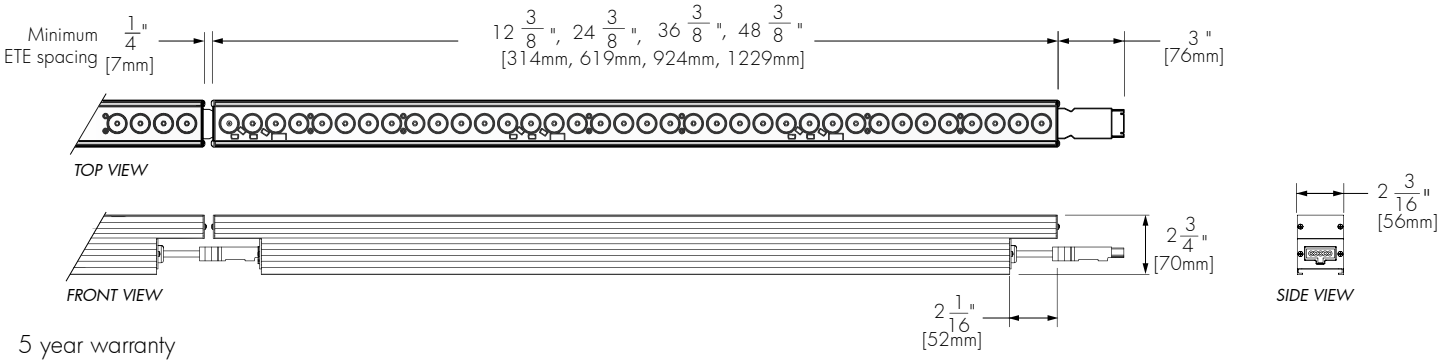


| PIN ID / | WIRE COLOR / | USE |
|---|---|---|
| (N) | WHITE | NEUTRAL |
| (⏚) | GREEN | GROUND |
| (1) | BLACK | LIVE 120-277V |
| (2) | ORANGE | 0-10V / DATA- |
| (3) | RED | 0-10V / DATA+ |

### CE Wiring detail



| PIN ID / | WIRE COLOR / | USE |
|---|---|---|
| (N) | BLUE | NEUTRAL |
| (⏚) | GREEN/YELLOW | GROUND |
| (1) | BROWN | LIVE 120-277V |
| (2) | GRAY | 0-10V / DATA- |
| (3) | BLACK | 0-10V / DATA+ |




5 year warranty



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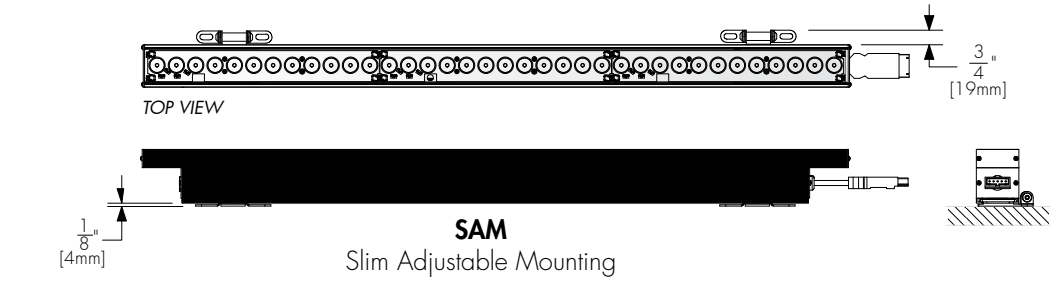
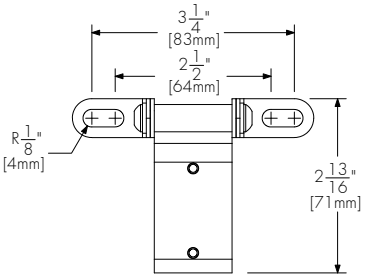
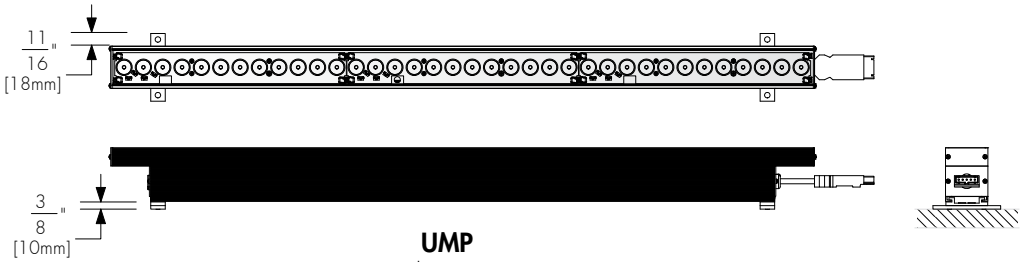
## MOUNTING OPTIONS



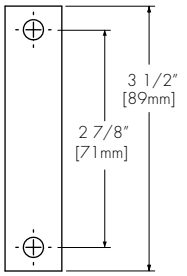

**SAM**
Slim Adjustable Mounting



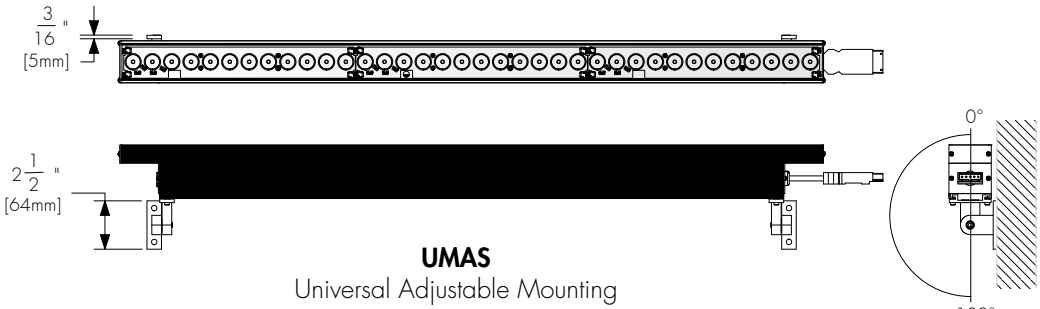

**SAM**
Mounting Hole Pattern



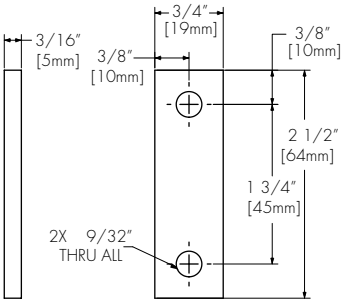

**UMP**
Fixed Mounting



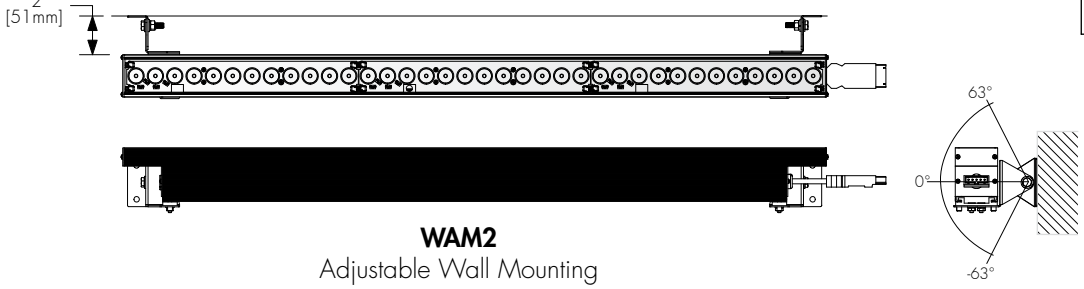

**UMP**
Mounting Hole Pattern



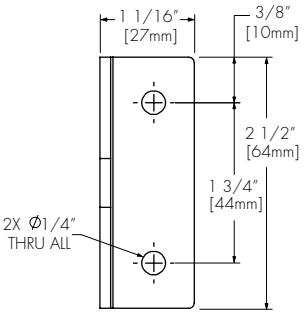

**UMAS**
Universal Adjustable Mounting



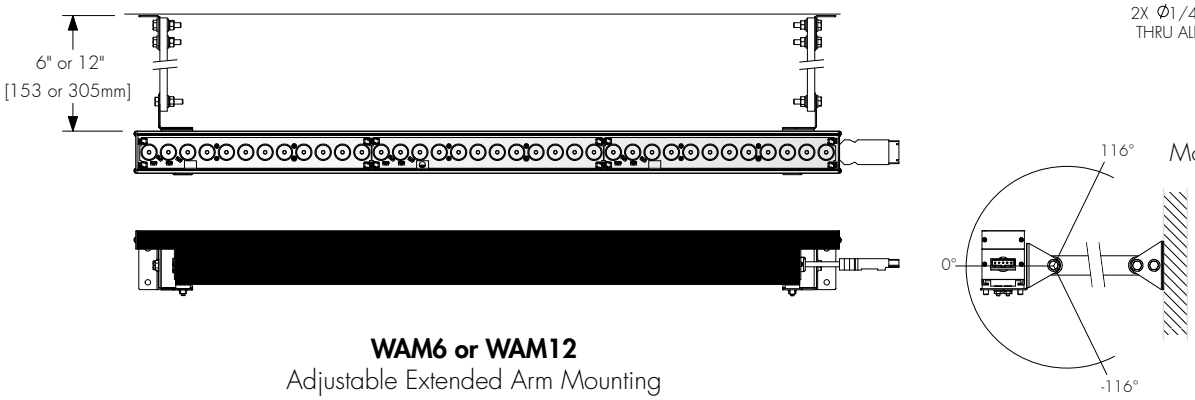

**UMAS**
Mounting Hole Pattern




**WAM2**
Adjustable Wall Mounting




**WAM**
Mounting Hole Pattern




**WAM6 or WAM12**
Adjustable Extended Arm Mounting

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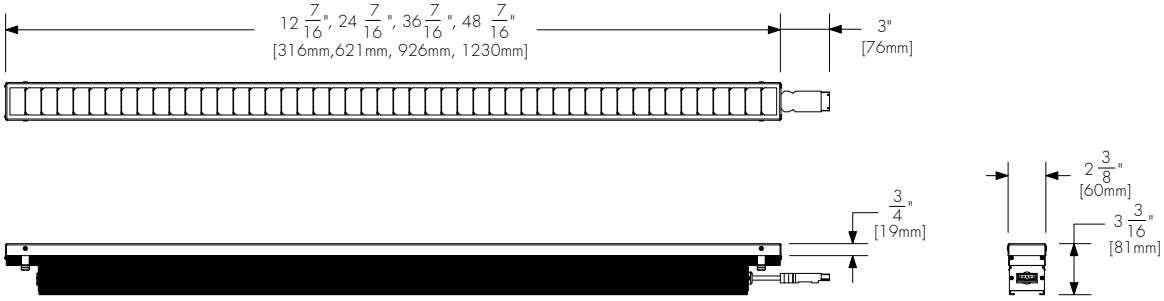
## LOUVER ACCESSORY INSTALLATION DETAIL




**LOGiRD**
Radial Louver for Lumenfacade Interior
(see page 4 for ordering code)



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## ACCESSORIES

Order separately

### Control Systems:

**LTO2** Lumentouch 2.0 is a wall mount DMX 512 controller keypad

**LCU** Lumencue is a USB / mini SD DMX 512 controller

**LID** LumenID is a diagnostic and addressing DMX 512 controller.
It must be specified on all DMX applications.
Refer to LID specification sheet for details.

**LTN** Lumentone is a simple pre-programmed DMX 512 controller
with a push button rotary dial and live feedback.

### CBOX :

**iCBOX-___V-___-___** Interior DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to iCBOX specification sheet for details.

**CBOX-___V-___-___** DMX 512 data box.
Data input and output, M20 provision holes with plugs.
Voltage input and output, M20 provision holes with plugs.
Up to six outputs to fixtures, M20 provision holes with plugs.
Please specify desired input voltage and finish.
Refer to CBOX specification sheet for details.

### Leader Cable :

**LOGiLCD___** Leader Cable for Lumenfacade interior.
Please add desired cable length : 10, 25 or 50 feet
Sealing endcap is mandatory for any unused connector.
(1) included with every leader cable

### Jumper Cable :

**LOGiJCD___** Jumper Cable for Lumenfacade interior.
Please add desired cable length : 1, 2, 4, 8, 10, 15 or 20 feet

### Radial Louver :

**LOGiRD___-___** Radial louver for Lumenfacade.

1. Please specify desired nominal length: 1', 2', 3' or 4'.
2. Please specify finish as BK - Black SandText
   (Custom color available on request, please specify as CC together with RAL color : _____)



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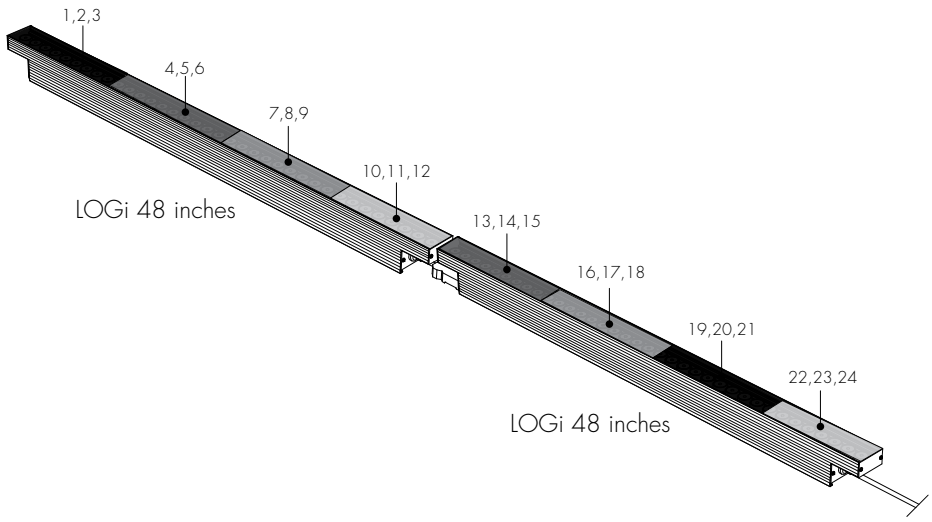
## RESOLUTION DETAILS
## APPLICABLE FOR DMX DIMMING OPTION ONLY

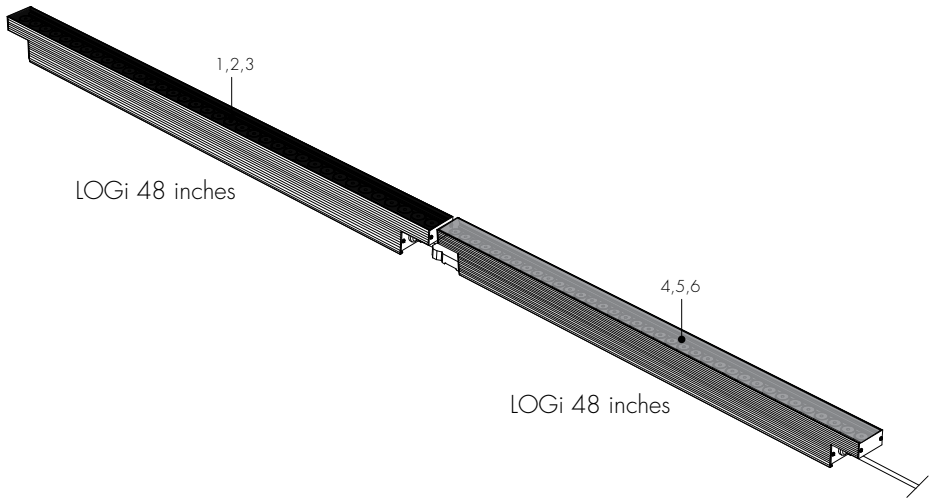
**DMX 1FT** - Resolution per foot: each foot is addressed independently (recommended for most installations)
1% minimum dimming value

DMX ADDRESSES:




**DMX 1FX** - Resolution per fixture: each fixture is addressed independently
1% minimum dimming value

DMX ADDRESSES:




*Warning: resolution is a factory setting and cannot be changed in the field.



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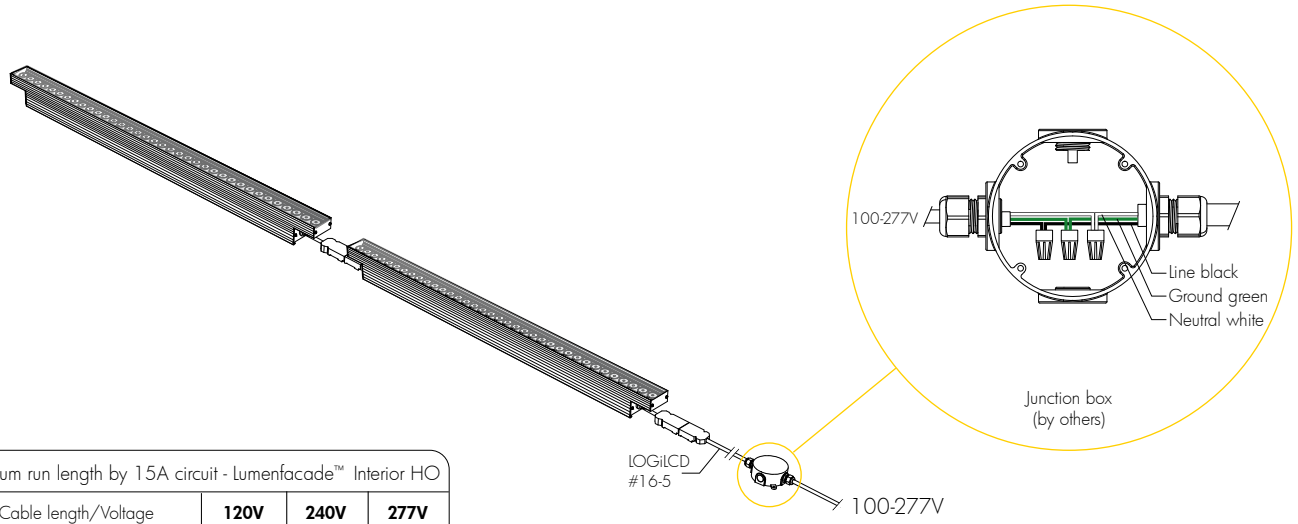
## TYPICAL WIRING DIAGRAMS

### Non-Dimming or Lumentalk Dimming Version

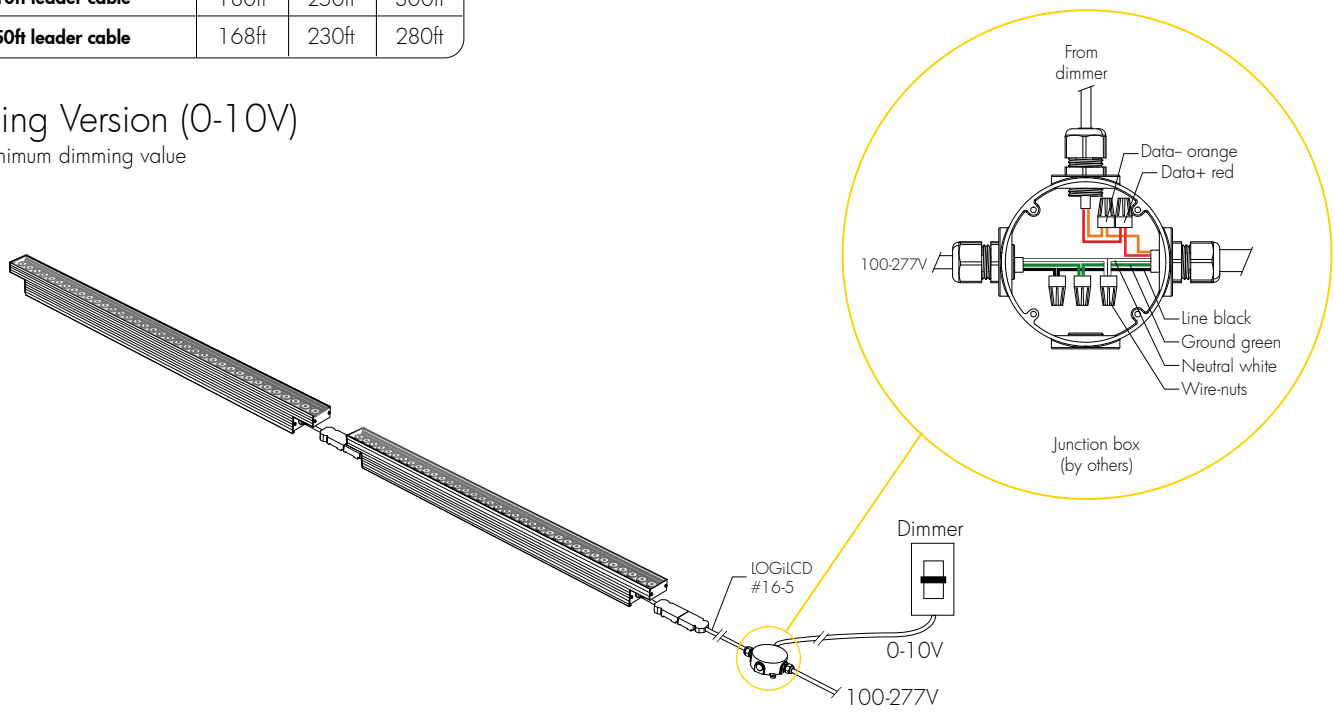



| Maximum run length by 15A circuit - Lumenfacade™ Interior HO | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 88ft | 100ft | 112ft |
| **50ft leader cable** | 68ft | 76ft | 84ft |
| Maximum run length by 15A circuit - Lumenfacade™ Interior RO | | | |
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 148ft | 168ft | 184ft |
| **50ft leader cable** | 120ft | 132ft | 148ft |

| ASHRAE Code Compliant - Lumenfacade™ 5W/ft<br>Maximum run length by 15A circuit | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 180ft | 250ft | 300ft |
| **50ft leader cable** | 168ft | 230ft | 280ft |

### Dimming Version (0-10V)

10% minimum dimming value







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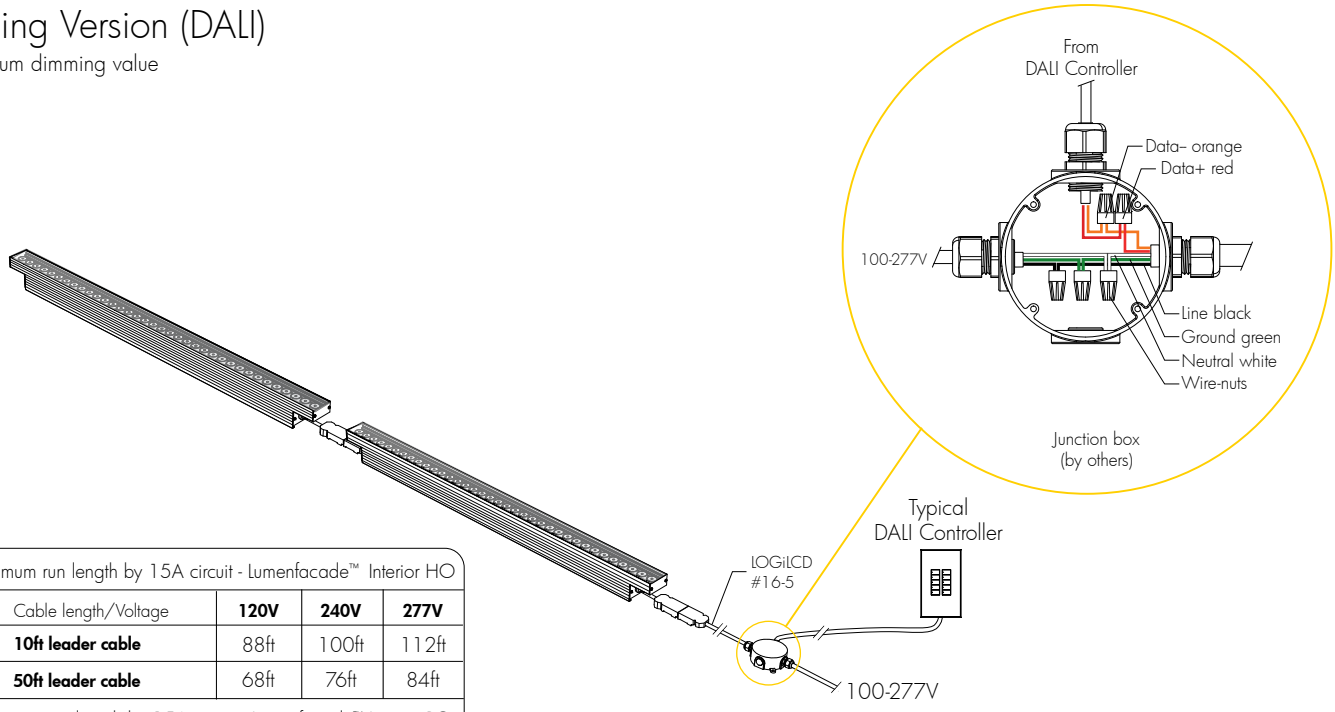
## TYPICAL WIRING DIAGRAMS - continued

### Dimming Version (DALI)

1% minimum dimming value



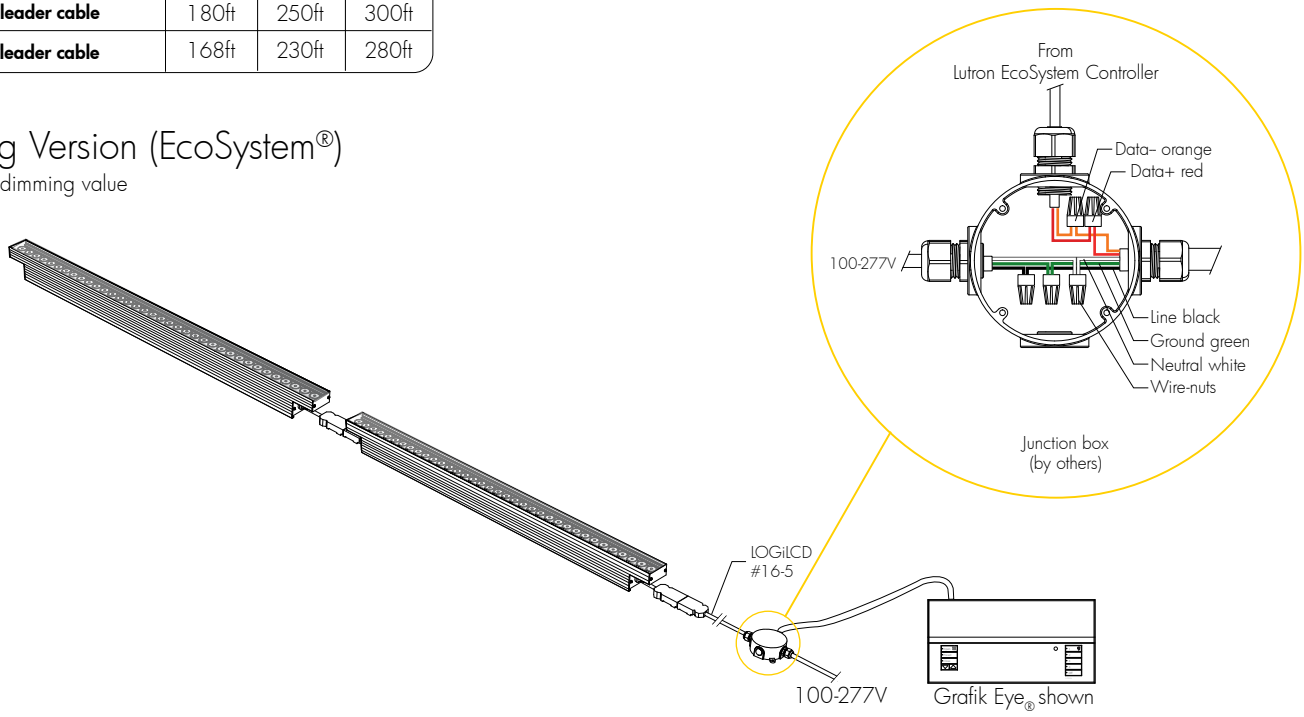

| Maximum run length by 15A circuit - Lumenfacade™ Interior HO | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 88ft | 100ft | 112ft |
| **50ft leader cable** | 68ft | 76ft | 84ft |

| Maximum run length by 15A circuit - Lumenfacade™ Interior RO | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 148ft | 168ft | 184ft |
| **50ft leader cable** | 120ft | 132ft | 148ft |

| ASHRAE Code Compliant - Lumenfacade™ 5W/ft<br>Maximum run length by 15A circuit | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 180ft | 250ft | 300ft |
| **50ft leader cable** | 168ft | 230ft | 280ft |

### Dimming Version (EcoSystem®)

1% minimum dimming value







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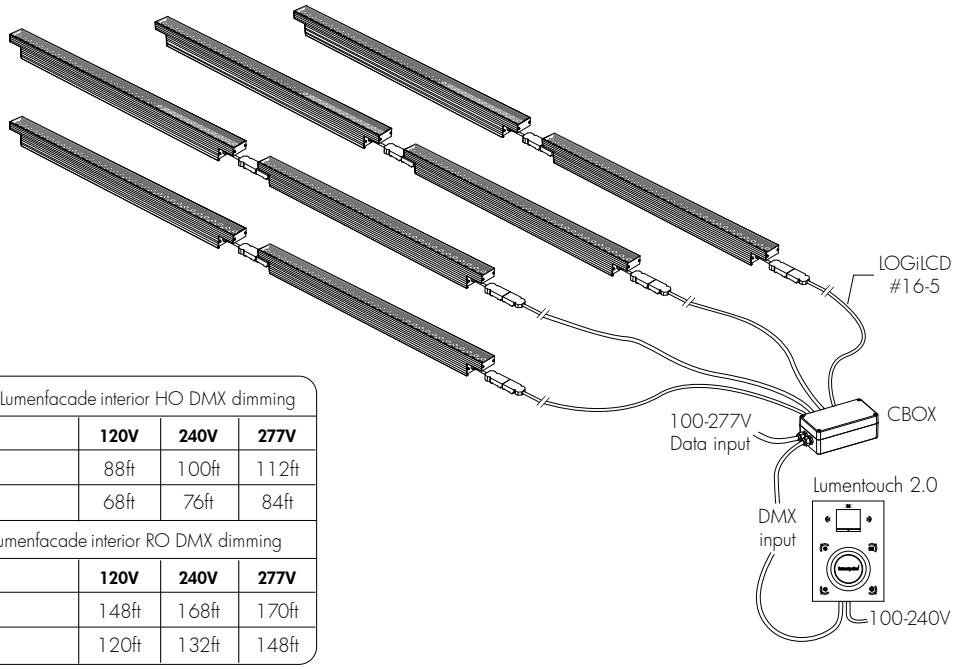
## TYPICAL WIRING DIAGRAMS - continued

### DMX Dimming Version (Star layout)

1% minimum dimming value




| Maximum run length by 15A circuit - Lumenfacade interior HO DMX dimming | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 88ft | 100ft | 112ft |
| **50ft leader cable** | 68ft | 76ft | 84ft |
| Maximum run length by 15A circuit - Lumenfacade interior RO DMX dimming | | | |
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 148ft | 168ft | 170ft |
| **50ft leader cable** | 120ft | 132ft | 148ft |

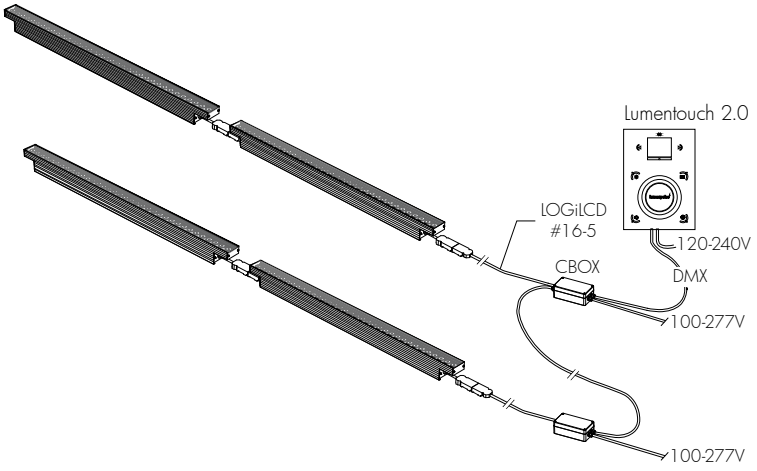
*Up to 170 individually addressable 1 foot sections per DMX run.
Consult factory for specific applications.

| ASHRAE Code Compliant - Lumenfacade™ 5W/ft DMX dimming<br>Maximum run length by 15A circuit | | | |
|---|---|---|---|
| Cable length/Voltage | **120V** | **240V** | **277V** |
| **10ft leader cable** | 170ft | 170ft | 170ft |
| **50ft leader cable** | 168ft | 170ft | 170ft |

*Up to 170 individually addressable 1 foot sections per DMX run.
Consult factory for specific applications.

### DMX Dimming Version (Daisy Chain Layout)

1% minimum dimming value







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## HOW TO ORDER

| LOGi Select: | Select: | Select: | Select: | Select: | Select: | Select: | Select: |
|---|---|---|---|---|---|---|---|
| Housing | Voltage | Length | Colors and color temperatures | Optic | Mounting Option | Finish | Control |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

### 1

### Housing:

**LOGi ASHRAE -** Lumenfacade™ interior, 5W/ft, ASHRAE compliant

**LOGi RO -** Lumenfacade™ interior Regular Output,8.5W/ft

**LOGi HO -** Lumenfacade™ interior High Output, 15.25W/ft

### 2

### Voltage:

**100 -** 100 volts
**120 -** 120 volts
**208 -** 208 volts
**220 -** 220 volts
**240 -** 240 volts
**277 -** 277 volts

### 3

### Length:

**12 -** 12 3/8 inches (314mm) (0.95 kg/2.1 lbs)
**24 -** 24 3/8 inches (619mm) (1.68 kg/3.7 lbs)
**36 -** 36 3/8 inches (924mm) (2.41 kg/5.3 lbs)
**48 -** 48 3/8 inches (1229mm) (3.08 kg/6.8 lbs)

### 4

### Colors and Color temperatures:

**27K -** 2700K
**30K -** 3000K
**35K -** 3500K
**40K -** 4000K
**RD -** Red
**GR -** Green
**BL -** Blue

### 5

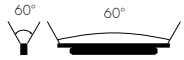
### Optics:

**10x10 -** 10° x 10°
*For best results use with HO fixtures at a 6-inch (15cm) setback from surface. Contact factory for application support.

**10x60 -** 10° x 60°

**30x60 -** 30° x 60°

**60x60 -** 60° x 60°




### 6

### Mounting Option:

**SAM -** Slim Adjustable Mounting
**UMP -** Fixed Mounting
**UMAS -** Universal Adjustable Mounting
**WAM2 -** Adjustable Wall Mounting 2"
**WAM6 -** Adjustable Extended Arm Mounting 6"
**WAM12 -** Adjustable Extended Arm Mounting 12"

### 7

### Finish:

**SI -** Silver SandText
**BK -** Black SandText
**WH -** White
**CC -** Custom (please specify RAL color)

### 8

### Control:

**NO -** No Dimming
**LT -** Lumentalk Dimming (available for 2', 3' and 4' lengths only) (1% minimum dimming value)
**DIM -** 0-10V Dimming option (10% minimum dimming value)
**DMX 1FT -** DMX Dimming option, resolution per foot (1% minimum dimming value)
**DMX 1FX -** DMX Dimming option, resolution per fixture (1% minimum dimming value)
**DALI -** DALI Dimming option (1% minimum dimming value)
**ES -** Lutron® EcoSystem® Enabled Dimming (available for 2', 3' and 4' lengths only) (1% minimum dimming value)

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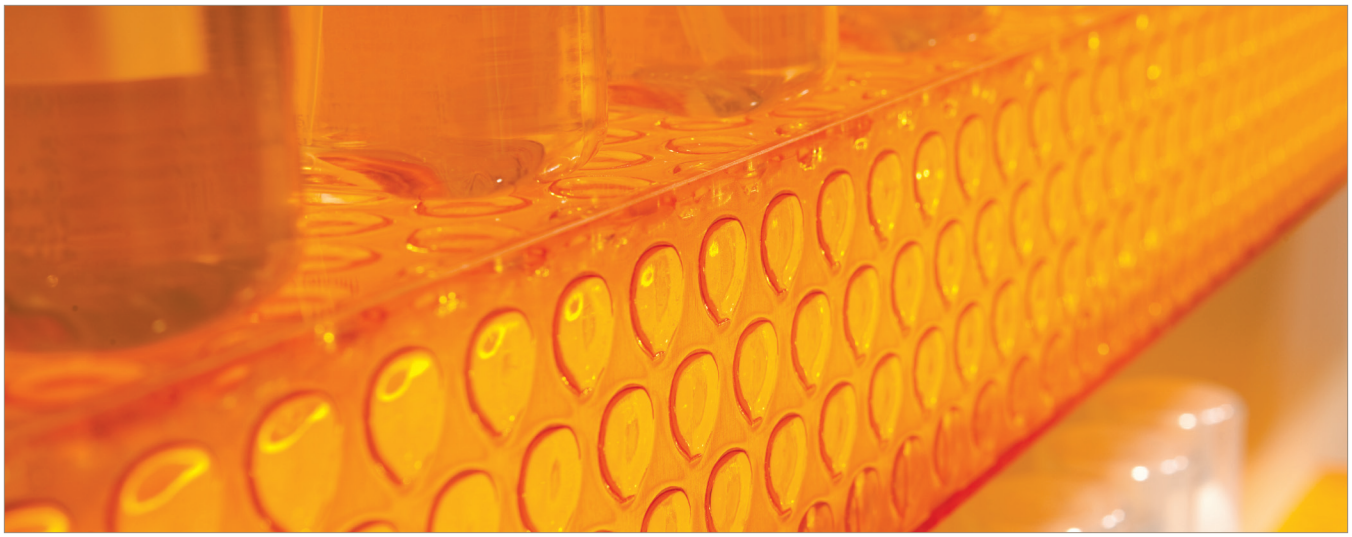
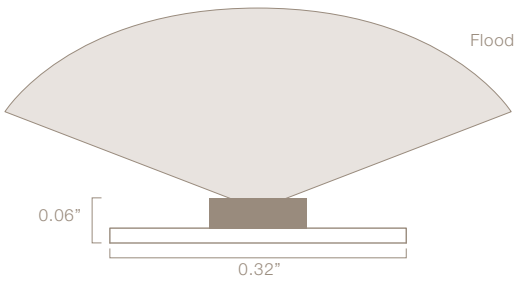
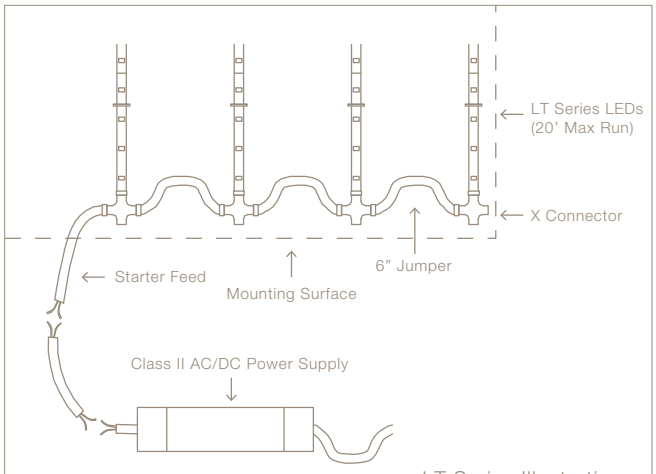


## Features and Specifications

- LED Life of approximately 35K hours, under normal operating conditions
- Low wattage, low voltage, low heat 24VDC Operation
- 12 inch joinable segments
- Adhesive Backed
- Ability to cut to length
- Available in warm white, cool white, blue, red, green, and yellow. (RGB available upon request)




LT Series Beam Angles



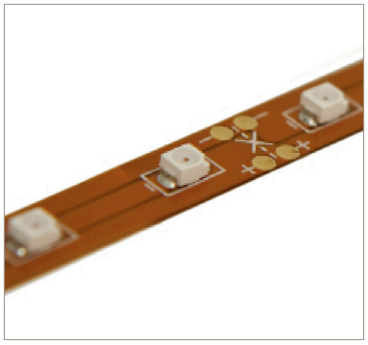

LT Series Illustrative
Wiring Diagram (24V, 1.8W/ft)



JUNE 2010 | LIGHTDES - LT SERIES LED TAPE | REV 001 © 2010 3form, Inc. All rights reserved.

## LED Tape

| PART NUMBER | COLOR | POWER (W/FT) | LUMENS PER FT | COLOR TEMPERATURE |
|---|---|---|---|---|
| 3-60-117 | WARM WHITE | 1.8 | 30 | 3000K |
| 3-60-118 | COOL WHITE | 1.8 | 30 | 6500K |
| 3-60-119 | BLUE | 1.8 | 6 | 470NM |
| 3-60-120 | RED | 1.2 | 36 | 624NM |
| 3-60-121 | GREEN | 1.8 | 18 | 515NM |
| 3-60-122 | YELLOW | 1.2 | 30 | 590NM |

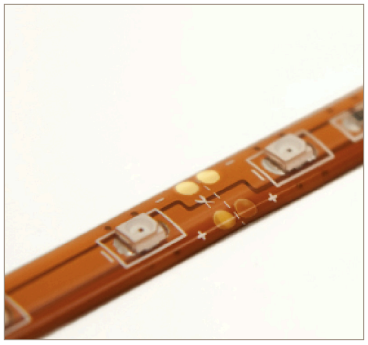


## LED Tape Drivers and Accessories

| PART NUMBER | ACCESSORIES AND DRIVER |
|---|---|
| 3-60-123 | 6" LED Tape Jumper |
| 3-60-124 | 12" LED Tape Jumper |
| 3-60-097 | X Connectors |
| 3-60-251 | Starter Feed for LED Tape |
| 3-60-205 | Starter Feed for Waterproof LED Tape |
| 3-60-098 | 100W Dimmable Driver |
| 3-60-099 | 40W Dimmable Driver |
| 3-60-131 | 10W - 24V Driver |
| 3-60-132 | 20W - 24V Driver |
| 3-60-134 | 60W - 24V Driver |
| 3-60-135 | 45W - 24V Driver |
| 3-60-136 | 150W - 24V Driver |

## Waterproof LED Tape

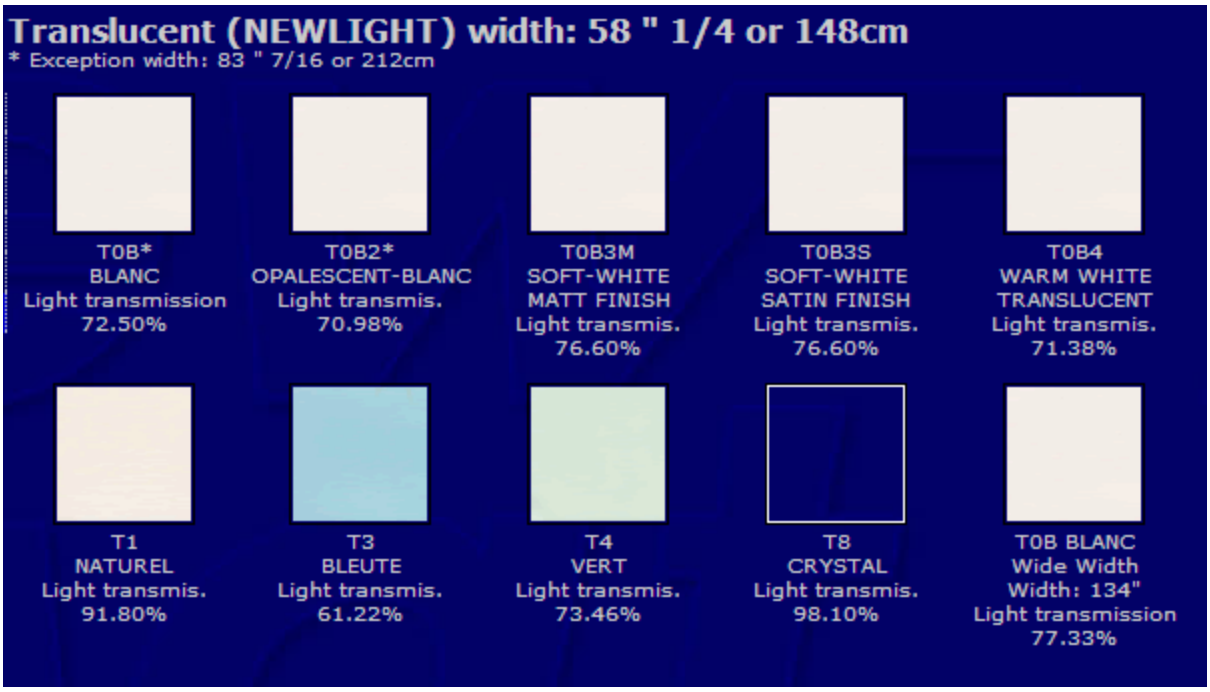
| PART NUMBER | COLOR | POWER (W/FT) | VOLTS | TEMPERATURE / WAVELENGTH |
|---|---|---|---|---|
| 3-60-125 | WARM WHITE | 1.8 | 24 | 3000K |
| 3-60-126 | COOL WHITE | 1.8 | 24 | 6500K |
| 3-60-127 | BLUE | 1.8 | 12 | 470NM |
| 3-60-128 | RED | 1.2 | 12 | 624NM |
| 3-60-129 | GREEN | 1.8 | 12 | 515NM |
| 3-60-130 | YELLOW | 1.2 | 12 | 590NM |



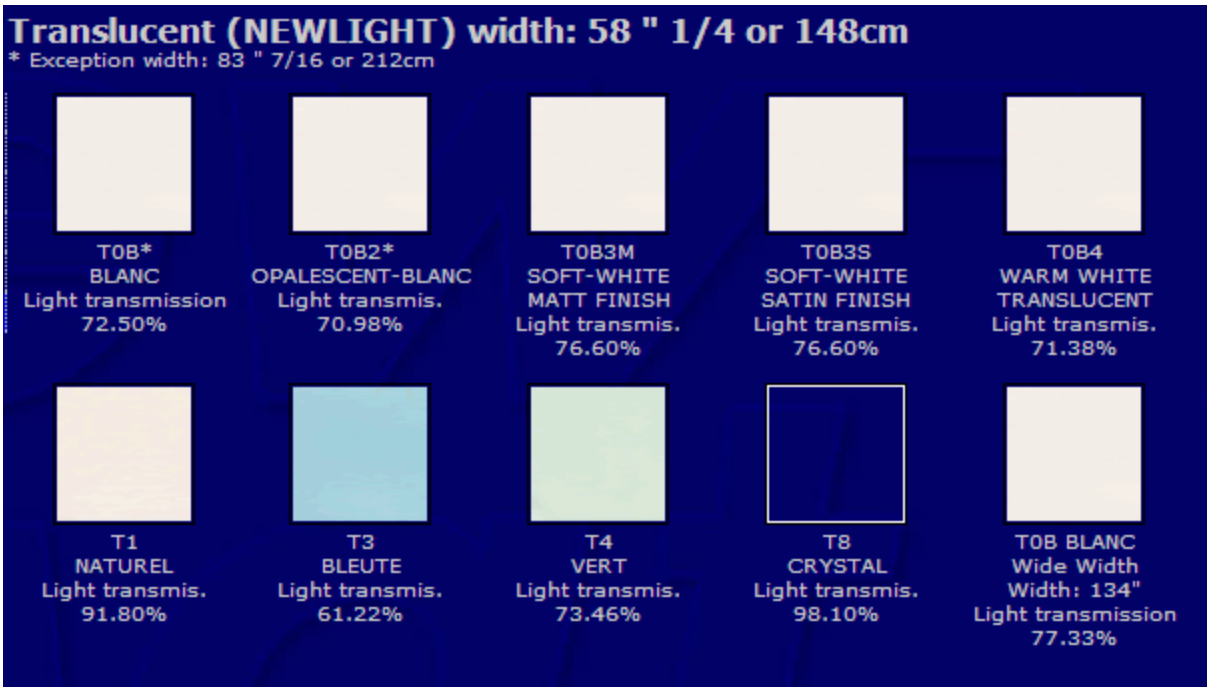
### Waterproof LED Tape Features

- Same features as standard LT Series LED Tape in waterproof format.
- 16' Long Rolls (Sold by the roll)
- Once field cut, cut off portion is unusable.

# LF1


Translucent (NEWLIGHT) width: 58 " 1/4 or 148cm
* Exception width: 83 " 7/16 or 212cm
T0B*
BLANC
Light transmission
72.50%
T0B2*
OPALESCENT-BLANC
Light transmis.
70.98%
T0B3M
SOFT-WHITE
MATT FINISH
Light transmis.
76.60%
T0B3S
SOFT-WHITE
SATIN FINISH
Light transmis.
76.60%
T0B4
WARM WHITE
TRANSLUCENT
Light transmis.
71.38%
T1
NATUREL
Light transmis.
91.80%
T3
BLEUTE
Light transmis.
61.22%
T4
VERT
Light transmis.
73.46%
T8
CRYSTAL
Light transmis.
98.10%
T0B BLANC
Wide Width
Width: 134"
Light transmission
77.33%

# LF2


Translucent (NEWLIGHT) width: 58 " 1/4 or 148cm
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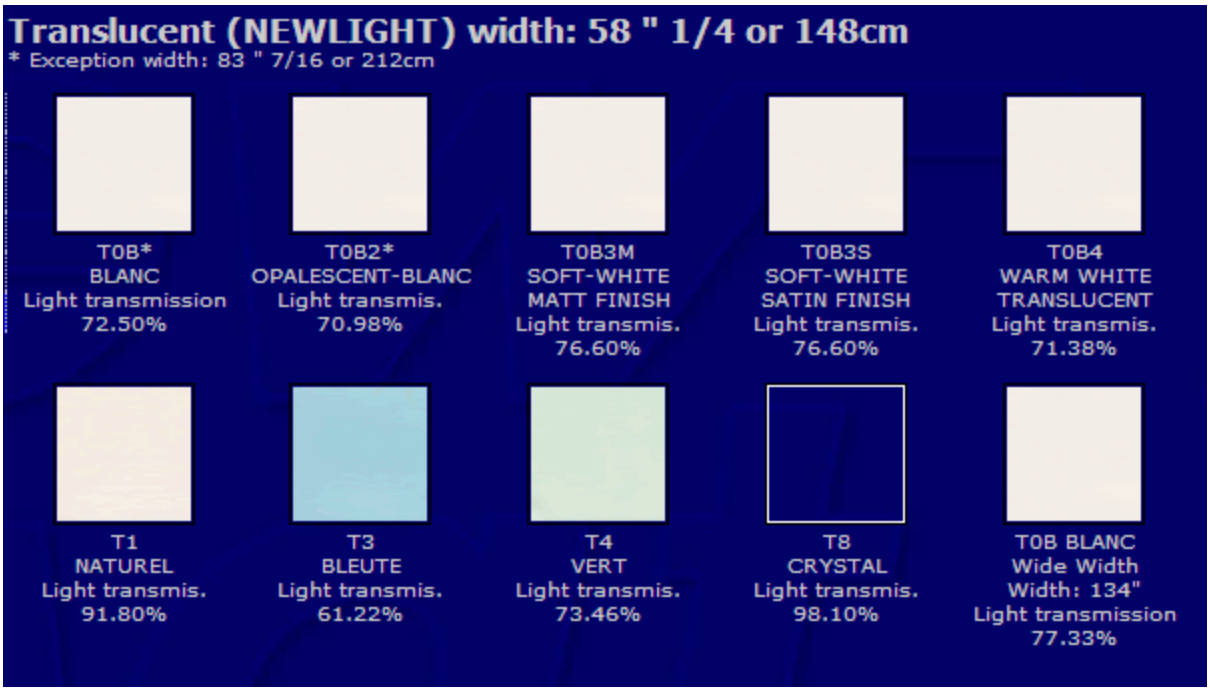
T0B*
BLANC
Light transmission
72.50%
T0B2*
OPALESCENT-BLANC
Light transmis.
70.98%
T0B3M
SOFT-WHITE
MATT FINISH
Light transmis.
76.60%
T0B3S
SOFT-WHITE
SATIN FINISH
Light transmis.
76.60%
T0B4
WARM WHITE
TRANSLUCENT
Light transmis.
71.38%
T1
NATUREL
Light transmis.
91.80%
T3
BLEUTE
Light transmis.
61.22%
T4
VERT
Light transmis.
73.46%
T8
CRYSTAL
Light transmis.
98.10%
T0B BLANC
Wide Width
Width: 134"
Light transmission
77.33%

# LF3


Translucent (NEWLIGHT) width: 58 " 1/4 or 148cm
* Exception width: 83 " 7/16 or 212cm
T0B*
BLANC
Light transmission
72.50%
T0B2*
OPALESCENT-BLANC
Light transmis.
70.98%
T0B3M
SOFT-WHITE
MATT FINISH
Light transmis.
76.60%
T0B3S
SOFT-WHITE
SATIN FINISH
Light transmis.
76.60%
T0B4
WARM WHITE
TRANSLUCENT
Light transmis.
71.38%
T1
NATUREL
Light transmis.
91.80%
T3
BLEUTE
Light transmis.
61.22%
T4
VERT
Light transmis.
73.46%
T8
CRYSTAL
Light transmis.
98.10%
T0B BLANC
Wide Width
Width: 134"
Light transmission
77.33%

LF4

3form® chroma®

## Product Description

3form Chroma is produced from optical grade engineered resin. Chroma is available in thick-gauge formats which lends itself well for use in many horizontal applications. Chroma is a highly functional material that brings impact when color is introduced. Chroma is produced with brilliant colors that can be layered (up to five colors) to create an enormous range of hues, opacities and amazing effects. The surface of Chroma features a durable renewable matte texture that can be easily refinished throughout its lifetime. Chroma incorporates 38% recycled content* (29% pre-consumer, 9% post-consumer) without compromising its amazing clarity. *2" Chroma does not contain recycled content

Chroma XT is exterior grade Chroma suitable for use as signage, lighting, awnings, tables or canopies. Use Chroma XT to bring amazing color and design to your exterior applications.

### FEATURES AND BENEFITS

- Great for edge lighting – tremendous optical properties and high light transmission
- Rigid - stable and sturdy material for horizontal applications
- Qualifies for 3form Reclaim™ – keeping end-of-life material out of landfills
- Combine up to five colors to create any color imaginable
- Surface is able to be completely refinished to maintain product "newness"

### AVAILABLE COLORS

3form Chroma comes in a variety of translucent warm and cool colors. Colors can be made opaque with the addition of the color - White Out.

(Visit www.3-form.com for the complete list of available color options.)

CHROMA REFLECT

3form Chroma Reflect™ pairs beautiful 3form colors with a reflective opaque mirror. The result is a breathtaking panel that glows and radiates color like you've never seen. Chroma Reflect panels are 1-sided and opaque. Chroma Reflect can only be paired with one Chroma color. The back finish of Chroma Reflect is left unfinished to allow for more versatility during fabrication. Chroma Reflect adds an extra 1/8" (3 mm) to the standard thickness of Chroma panels. Additionally, Chroma Reflect is not suitable for exterior use and requires special fabrication techniques.

### TEXTURES/PATTERNS/FINISHES

All Chroma sheets come standard with a Renewable matte finish on the front face that allows the product to be continually rejuvenated if ever desired or necessary during the service life of the material. The back side of 3form Chroma in translucent colors is finished with a matte finish, but this side should not be renewed. Chroma Clear comes standard with renewable matte surfaces on front and back.

Chroma panels can be ordered with an optional Renewable Matte Back Finish, that allows refinishing of both sides of the panel. The Renewable Matte Back Finish increases the thickness by an extra 1/16" (1.5 mm).

Chroma panels that are opaque (unless specified differently) are finished with a gloss backside texture to allow for more versatility during fabrication. Chroma is also available with an optional Patent finish. Patent is a high gloss finish with the highest light transmittance, but does not allow for refinishing. (Chroma Reflect is not available with Patent finishes)

### PANEL SIZES AND TOLERANCES

All dimensions and squareness (standard or custom) are subject to a +1/4" or - 3/16" (+6 mm or -5 mm) tolerance. Squareness (standard or custom) is subject to a 1/8" (3.1 mm) tolerance.

Chroma is available in 1/4 inch (6.3 mm), 1/2 inch (12.7 mm), 1 inch (25.4 mm) and 2 inch (50.8 mm) thicknesses.

PANEL SIZE TABLE

| NOMINAL GAUGE | PANEL DIMENSIONS |
|---|---|
| 1/4" (6.3 mm) | 48" x 96" (122 cm x 243.8 cm), 48" x 120" (122 cm x 304.8 cm) |
| 1/2" (12.7 mm) | 48" x 96" (122 cm x 243.8 cm), 48" x 120" (122 cm x 304.8 cm) |
| 1" (25.4 mm) | 48" x 96" (122 cm x 243.8 cm), 48" x 120" (122 cm x 304.8 cm) |
| 2" (50.8 mm) | 48" x 96" (122 cm x 243.8 cm) |

Given the unique manufacturing process for 3form Chroma, a given gauge is subject to a +/- 10% thickness tolerance. Thickness values are based on measurements 2-3" (50-75 mm) from the edge, along both long edges of each panel.

THICKNESS TOLERANCE TABLE

STANDARD CHROMA, HIRES AND XT PANELS (XT NOT AVAILABLE IN 1/4")

| GAUGE* | MINIMUM ALLOWANCE | MAXIMUM ALLOWANCE |
|---|---|---|
| 1/4" (6.3 mm) | 0.200" (5.1 mm) | 0.335" (8.5 mm) |
| 1/2" (12.7 mm) | 0.450" (11.4 mm) | 0.585" (14.9 mm) |
| 1" (25.4 mm) | 0.900" (22.9 mm) | 1.100" (27.9 mm) |
| 2" (50.8 mm) | 1.800" (45.7 mm) | 2.200" (55.9 mm) |

REFLECT AND PANELS WITH RENEWABLE MATTE BACK FINISH

| GAUGE* | MINIMUM ALLOWANCE | MAXIMUM ALLOWANCE |
|---|---|---|
| 5/8" (15.9 mm) | 0.515" (13.1 mm) | 0.710" (18.0 mm) |
| 1-1/8" (28.6 mm) | 0.965" (24.5 mm) | 1.225" (31.1 mm) |
| 2-1/8" (53.9 mm) | 1.865" (47.4 mm) | 2.325" (59.1 mm) |

*Chroma Reflect adds 1/8" (3 mm) and renewable matte back finish materials add 1/16" (1.5 mm) to overall thickness.

### FLATNESS TOLERANCE

Chroma panels shall not have distortion in the form of a wrinkle, twist or scallop along the perimeter of the sheet. Overall warp in the form of a curve (bow warp) extending across the sheet is permitted to a maximum of 1/4" (6.3 mm) for each 48" (1.2 m), or fraction thereof. Panel is to be measured when laying horizontally under its own weight on a flat continuous surface.

# Specifications

### FLAMMABILITY & SMOKE TEST RESULTS
BUILDING CODE APPROVALS

3form Chroma conforms to the 2009 International Building Code® for light-transmitting plastics. The provisions of these codes provide adequate regulation for most applications of light-transmitting plastics [unless otherwise noted, data is based on 0.236" (6 mm) thickness]:

| TEST | 3FORM CHROMA | RESULT |
|---|---|---|
| ASTM D 2843 Smoke Density | 4.1% | PASS Less than 75 |
| ASTM D 635 Flame Spread | Rate of burning: 1.2 in/min | PASS CC2 |
| ASTM D 1929 Self-ignition Temp. | 852°F | PASS Greater than 650°F |
| ASTM E 84-03<br>Flame Spread, 1" Thickness<br>Smoke Developed | <br>115<br>150 | <br>Class C (76-200)<br>450 (less than 450) |

### PANEL WEIGHT

| THICKNESS (INCHES) | WEIGHT FLUX (LB/FT²) |
|---|---|
| 1/4" (6.3 mm) | 1.5 lb/ft² (7.3 kg/m²) |
| 1/2" (12.7 mm) | 3.1 lb/ft² (15.1 kg/m²) |
| 1" (25.4 mm) | 6.2 lb/ft² (30.2 kg/m²) |
| 2" (50.8 mm) | 12.4 lb/ft² (60.5 kg/m²) |

***Chroma XT panels weigh an additional 0.4 lb/lf² (1.9 kg/m²)**

****Chroma Reflect panels weigh an additional 0.8 lb/lf² (3.8 kg/m²)**

### EXPANSION/CONTRACTION ALLOWANCES

Like all resin products, 3form Chroma will expand and contract nominally with fluctuations in temperature. The following formula provides allowances that should be made in framed or fitted applications:

- Longest length of panel (inches) x temperature change of the sheet (°F) x 0.00004 =Amount of Linear Expansion/Contraction (inches)

**example:**

- A 48" x 96" panel that experiences a 50°F temperature change will expand/contract: 96 inches x 50 degrees x 0.00004 = 0.192 inches

Installers should take extra precautions if installation is occurring before the HVAC systems are operational. Allowances should also be made in the following situations:

- Fastening points
- Channel depths in frames
- Holes for standoffs and other hardware
- Meeting points for multiple sheets of 3form Chroma

### ETCHING

3form Chroma may be etched with two different finishing options to produce patterns, text, or anything imaginable. When etching, two different surface finishes may be specified: Polished and Renewable matte. Following are some limitations to the etching process:

Chroma XT products are not able to accept etching as the etching process creates part stress that could induce crazing.

Only 1/2"-2" Chroma may be etched.

- Limited to 1/8" deep
- Etch must be greater than 1/2" wide

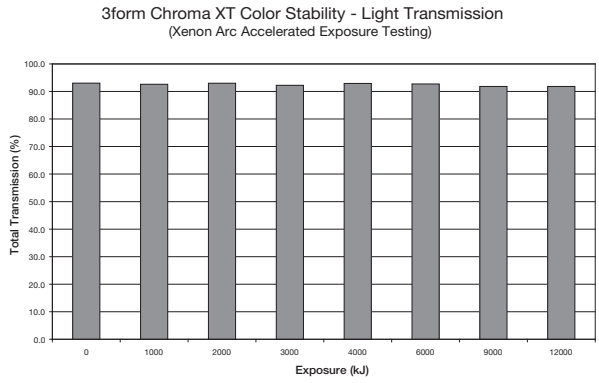
### UV EXPOSURE PERFORMANCE

Chroma XT is an excellent choice for exterior applications. The chart demonstrates that the change in light transmission remains unchanged. (12,000 kJ of exposure represents approximately 10 years of outdoor exposure in Florida) Should your application be for exterior use, please notify your 3form Sales Representative.

*Chroma Reflect cannot be used in exterior applications.

### USAGE LIMITATIONS

3form Chroma should never come in direct contact with metal fasteners. Non-metallic* gaskets, washers, and tubing are to be utilized in conjuntion with mechanical connections such as point supports and frames. Holes for fasteners must be located a minimum of 2" from the edge of




the hole to the edge of the panel.

Please contact the 3form Technical Help Line should you have any questions regarding the use of Chroma with mechanical fasteners.

*Gaskets, washers and tubing must be produced with a non-plasticized material. Suitable materials include: neoprene, teflon, nylon, silicone.

### DEFLECTION

3form Chroma will exhibit different amounts of deflection given a variety of factors: fastening techniques, loads, gauges and panel dimensions to list a few. Your 3form Representative can assist you with general deflection guidelines for your application using the Chroma Deflection Charts. If your application has specific engineering requirements, please contact the 3form Technical Help Desk for additional direction at 801-649-2670.

### HEAT FORMING/COLD BENDING

3form Chroma can be heated and formed to produce simple or even complex curves and shapes. The table below lists the minimum inner radius for a heat formed shape. Tighter radii may be possible, contact 3form Technical Service for details.

| THICKNESS | MINIMUM HEATFORMING RADIUS |
|---|---|
| 1/4" (6.3 mm) | 4" (101.6 mm) |
| 1/2" (12.7 mm) | 4" (101.6 mm) |
| 1" (25.4 mm) | 8" (203.2 mm) |
| 2" (50.8 mm) | 12" (304.8 mm) |

The optimal forming temperature ranges from 300º- 330ºF. Large and complex forming geometries should be specified to be produced by the 3form Fabrication experts.

**SPECIAL CONSIDERATIONS FOR THE HEAT-FORMING OF CHROMA HIGHRES.**

1/2" thickness only (Maximum finished sizes of 46" x 94" and 46" x 118")
Renewable Matte finishes only
No Complex Curves

Though 3form Chroma is commonly used in flat or heat curved applications, the polymeric nature of the material allows a minimal

amount of cold bending for a given panel. Cold bending is not possible on 1" and 2" gauges. The table below shows the minimum suggested radius for 3form Chroma at a given gauge:

| THICKNESS | MINIMUM BEND RADIUS |
|---|---|
| 0.250" (6.3 mm) | 150" (381 cm) |
| 0.500" (12.7 mm) | 225" (571 cm) |

### EDGE FINISHING

Edges of 3form Chroma panels are able to be machined or routed into a variety of different forms. In addition to a straight edge, edges may accept beveling, rounding, etc. Additional finishing, such as sanding or polishing, can also be provided to some edges.

### FABRICATION LIMITATIONS

Chroma Reflect requires special consideration during fabrication. When cutting panels using table saws or panels saws where the blade is situated below the panel, the back side (reflect side) of the panel needs to be facing UP. The back side of the panel should be facing down if it is being cut by a circular saw or a panel saw where the blade is above the panel.

Chroma reflect panels can be cut with a CNC router or a plunge router. Chroma Reflect MUST be scored with a 1/16" or 1/8" blade or tool before routing. All CNC cutting must be done from the back side. Chroma Reflect panels CAN NOT be cut with a jig saw or reciprocating saw.

### REFINISHING

One of the unique benefits of 3form Chroma is its ability to be refinished. If 3form Chroma needs to be refinished for any reason, the panels may be renewed by sanding. Make sure to sand the entire surface to obtain a uniform finish over the whole panel. Begin by dry sanding with a course grit paper (100 or 150 grit) to remove blemishes/scratches. Continue sanding with gradually finer grit papers until the surface is smooth and level and the blemish/scratches are removed. Complete the refinishing process by sanding with a 220 grit paper to attain a matte finish. Only the primary surface (non-colored side) is refinishable. After sanding, clean the surface with warm water and a mild detergent. Dry with a clean, cotton cloth and finish by treating the panel with Countertop Magic®. Even finer grit papers may be used to attain a satin or semi-polished appearance. With papers greater than 400 grit, wet sanding (with water) should be employed. Be sure to keep sanders in motion at all times when refinishing surfaces or edges. Only use light pressure with power sanders in order to maintain evenness and avoid overheating of the sheet surface.

### SOUND TRANSMISSION CLASS (STC) VALUES FOR CHROMA

Measurement protocol: ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

| THICKNESS | STC VALUES |
|---|---|
| 1/2" (12.7 mm) | 32 |
| 1" (25.4 mm) | 36 |

### THERMAL INSULATION VALUES FOR CHROMA

Insulation values are a function of both the convective properties (U-Values and shading coefficients) and the conductive properties (thermal conductivity).

| CHROMA RENEW/RENEW THICKNESS | WINTER U-VALUE (BTU/HR-FT²-°F) | SUMMER U-VALUE (BTU/HR-FT²-°F) |
|---|---|---|
| 1/2" (12.7 mm) | 0.82 | 0.81 |
| 1" (25.4 mm) | 0.65 | 0.65 |
| 2" (50.8 mm) | NOT TESTED | NOT TESTED |

## Select Mechanical and Physical Properties for 3form Chroma

| | | TYPICAL VALUES | |
|---|---|---|---|
| **PROPERTY** | **ASTM METHOD** | **US CUSTOM** | **METRIC** |
| **GENERAL** | | | |
| Density | D1505 | 1.19 g/cm$^3$ | 1.19 x 10$^{-3}$ kg/cm$^3$ |
| Water Absorption | D579 24hrs @ 73°F | 0.2% | 0.2% |
| **MECHANICAL** | | | |
| Tensile Strength | D638 | 10,000 psi | 69 MPa |
| Elongation at Rupture | D638 | 4.5% | 4.5% |
| Tensile Modulus | D638 | 400,000 psi | 2800 MPa |
| Flexural Strength (rupture) | D790 | 17,000 psi | 117 MPa |
| Flexural Modulus | D790 | 480,000 psi | 3300 MPa |
| Compressive Strength (yield) | D695 | 17,000 psi | 117 MPa |
| Compressive Deformation | D621 4000 psi, 122ºF, 24 hours) | ≤0.85% | |
| Shear Ultimate Strength | D732 | 10,000 psi | 703 kg/cm$^2$ |
| Shear Modulus | D5279 | 167,000 psi | 1151 MPa |
| Impact Strength (charpy method) | D256 notched | 2.1 lbf*in/in | 0.9 kgf*cm/cm |
| | D256 un-notched | 7 lbf*in/in | 3.17 kgf*cm/cm |
| Izod Impact Strength | D256 notched | ≤0.25 ft-lb/in | ≤13.3 J/m |
| Rockwell Hardness | D785 | M-93 | M-93 |
| Barcol Hardness | D2583 | 48 | 48 |
| Residual Shrinkage (internal strain) | D702 | 2% | 2% |
| Coefficient of Friction | D2047 dry<br>D2047 wet | 0.73<br>0.79 | |
| Poisson's Ratio | E132 | 0.35-0.40 | |
| **OPTICAL** | | | |
| Refractive Index | D542 | 1.49 | 1.49 |
| Light Transmission (total) | D1003 | 92% | 92% |
| Haze | D1003 | <1% | <1% |
| **THERMAL** | | | |
| Max Continuous Use Temperature | | 180ºF | 82ºC |
| Max Instantaneous Use Temperature | | 212ºF | 100ºC |
| Deflection Temperature | D648 @ 264 psi | 195ºF | 90ºC |
| Vicat Softening Point | D1525 | 239ºF | 115ºC |
| Forming Temperature | | 300-330ºF | 149-157ºC |
| Coefficient of Thermal Conductivity (k-factor) | cenco-fitch | 1.3 btu/(hr)ft$^2$(ºF) | 0.19 w/mºK |
| Coefficient of Thermal Expansion | D696 @ 60ºF (16ºC) | 4.0 x 10$^{-5}$(in/in/ºF) | 7.2 x 10$^{-5}$(mm/mm/ºC) |

## Chemical Resistance of 3form Chroma to Select Compounds

### 7 DAY FULL IMMERSION TESTING @ 73°F (23°C)

Polymer materials are affected by chemicals in different ways. Changes in performance or appearance when exposed to chemicals can be attributed to fabrication methods, exposure conditions, concentration of chemical substances or exposure duration. Such factors can even influence the final effect on substances that 3form Chroma is considered "Resistant" to under test conditions. Further details are explained below:

FABRICATION

Stresses generated from sanding, grinding, drilling, polishing, machining, sawing and/or forming (hot or cold).

EXPOSURE

Exposure duration, stresses imparted during the application life-cycle due to loads, temperature changes, heat, environments, etc.

APPLICATION OF CHEMICALS

Application from contact, rubbing, wiping, spraying, soaking, etc. Also having an affect is the relative concentration of the chemical in question.

The following table provides indicative performance of the chemical resistance characteristics of clear 3form Chroma panels. The following codes are used to describe the chemical resistance characteristics:

**R = RESISTANT**

3form Chroma is able to withstand the identified compound for long exposure periods. (7 days, full immersion)

**LR = LIMITED RESISTANCE**

3form Chroma is only resistant when in contact with this compound for short periods at room temperature. It is advised that further determination of the effect of the substance be further tested in your particular application.

**N = NOT RESISTANT**

3form Chroma is not resistant to the compound. The material will swell, craze, haze, dissolve or experience some physical change when exposed to this substance.

| REAGENT | RESULT | REAGENT | RESULT |
|---|---|---|---|
| acetic acid (5%) | R | hydrochloric acid | R |
| acetic acid (glacial) | N | hydrofluoric acid (40%) | N |
| acetic anhydride | LR | hydrogen peroxide (3%) | R |
| acetone | N | hydrogen peroxide (28%) | N |
| acrylic paints and lacquers | LR | iso octane | R |
| ammonia (aqueous solution) | R | isopropyl alcohol | LR |
| ammonium chloride (saturated) | R | kerosene | R |
| ammonium hydroxide (10%) | R | lacquer thinner | N |
| ammonium hydroxide (conc.) | R | lactic acid (80%) | LR |
| aniline | N | methane | R |
| battery Acid | R | methyl alcohol (50%) | LR |
| benzaldehyde | N | methyl alcohol (100%) | N |
| benzene | N | methyl ethyl ketone (MEK) | N |
| bituminous emulsion | N | methylene chloride | N |
| bleach (see sodium hypochlorite) | R | mineral oil | R |
| bromine | N | mortar | R |
| butanol | LR | motor fuel (benzene-free) | R |
| butyl acetate | N | motor fuel (with benzene) | N |
| calcium chloride (saturated) | R | muriatic acid (20%) | R |
| calcium hypochlorite | R | nitric acid (10%) | R |
| carbon tetrachloride | N | nitric acid (40%) | LR |
| cement | R | nitric acid (conc.) | N |
| chlorine water | LR | oil paints (pure) | R |
| chloroform | N | olive oil | R |
| chromic acid (40%) | N | oxygen | R |
| citric acid (10%) | R | ozone | R |
| cottonseed oil (edible) | R | phenol solution (5%) | N |
| detergent solution | R | phosphoric acid (10%) | R |
| diesel oil | R | plaster of paris | R |
| diethyl ether | N | soap solution (ivory) | R |
| dimethyl formamide | N | sodium carbonate (2%) | R |
| dioctyle formamide | N | sodium carbonate (20%) | R |
| ethyl acetate | N | sodium chloride (10%) | R |
| ethyl alcohol (50%) | LR | sodium hydroxide (1%) | R |
| ethyl alcohol (95%) | N | sodium hydroxide (10%) | R |
| ethyl dichloride | N | sodium hydroxide (60%) | R |
| ethylene gycol | R | sodium hypochlorite (5%) | R |
| 2-ethylhexyl sebacate | R | stearic acid | R |
| formaldehyde (40%) | R | sulfuric acid (3%) | R |
| formic acid (2%) | R | sulfuric acid (30%) | R |
| formic acid (40%) | LR | sulfuric acid (conc.) | N |
| gasoline (regular, leaded) | LR | thinners (general) | N |
| glycerine | R | toluene | N |
| glycerol | R | tricholoroethylene | N |
| glycol | R | turpentine | LR |
| heptane | R | urine | R |
| hexane | R | water (distilled) | R |
| hot bitumen | LR | xylene | N |

## Cleaning Instructions

3form Chroma, like all thermoplastic materials should be cleaned periodically. A regular cleaning program will help to maintain the aesthetics and life of the material. 3form recommends the use of Novus® No. 1 and Brillianize® plastic cleaners. Both products are specifically for use on plastics and help panels to resist finger-marking and static.

Rinse or wipe the sheet with lukewarm water. Remove dust and dirt from 3form Chroma with a damp, soft cloth or sponge and a solution of mild soap and/or liquid detergent in water. Rinse or wipe the 3form Chroma again thoroughly with lukewarm water. For more stubborn stains, dirty spots or grease, surface cleaners like Fantastik® or Formula 409® also work well. A scotch brite sponge can also help remove tough grease stains. After all cleaning steps, be sure to rinse thoroughly with lukewarm water.

Always use a soft, damp cloth to blot dry. Rubbing with a dry cloth can scratch the material and create a static charge. Never use scrapers or squeegees on 3form Chroma. Also avoid scouring compounds, gasoline, benzene, acetone, carbon tetrachloride, certain deicing fluids, lacquer thinner or other strong solvents.

**DO NOT:**

- Use squeegees or scrapers as they may scratch the sheet
- Use scouring compounds or solvents such as: acetone, gasoline, benzene, carbon tetrachloride, or lacquer thinner to clean the sheet
- Use abrasives or highline alkaline cleaners
- Use a dry cloth or a cloth of synthetic fiber such as rayon or polyester as they may scratch the sheet.
- Use Windex® or Glass Plus® cleaners

**DO:**

- Use warm water, mild detergent and a soft cloth or chamois
- Rinse surface thoroughly after cleaning with lukewarm water
- Blot dry with slightly damp, soft cloth or chamois

**IMPORTANT**

If a cleaning material is found to be incompatible in a short-term test, it will usually be found to be incompatible in the field. The converse, however, is not always true. Favorable performance is no guarantee that actual end-use conditions have been duplicated. Therefore, these results should be used as a guide only and it is recommended that the user test the products under actual end-use conditions.

For more information, please visit 3-form.com or call 877-649-2670.

3form® chroma®

## Product Description

3form Chroma is produced from optical grade engineered resin. Chroma is available in thick-gauge formats which lends itself well for use in many horizontal applications. Chroma is a highly functional material that brings impact when color is introduced. Chroma is produced with brilliant colors that can be layered (up to five colors) to create an enormous range of hues, opacities and amazing effects. The surface of Chroma features a durable renewable matte texture that can be easily refinished throughout its lifetime. Chroma incorporates 38% recycled content* (29% pre-consumer, 9% post-consumer) without compromising its amazing clarity. *2" Chroma does not contain recycled content

Chroma XT is exterior grade Chroma suitable for use as signage, lighting, awnings, tables or canopies. Use Chroma XT to bring amazing color and design to your exterior applications.

### FEATURES AND BENEFITS

- Great for edge lighting – tremendous optical properties and high light transmission
- Rigid - stable and sturdy material for horizontal applications
- Qualifies for 3form Reclaim™ – keeping end-of-life material out of landfills
- Combine up to five colors to create any color imaginable
- Surface is able to be completely refinished to maintain product "newness"

### AVAILABLE COLORS

3form Chroma comes in a variety of translucent warm and cool colors. Colors can be made opaque with the addition of the color - White Out.

(Visit www.3-form.com for the complete list of available color options.)

CHROMA REFLECT

3form Chroma Reflect™ pairs beautiful 3form colors with a reflective opaque mirror. The result is a breathtaking panel that glows and radiates color like you've never seen. Chroma Reflect panels are 1-sided and opaque. Chroma Reflect can only be paired with one Chroma color. The back finish of Chroma Reflect is left unfinished to allow for more versatility during fabrication. Chroma Reflect adds an extra 1/8" (3 mm) to the standard thickness of Chroma panels. Additionally, Chroma Reflect is not suitable for exterior use and requires special fabrication techniques.

### TEXTURES/PATTERNS/FINISHES

All Chroma sheets come standard with a Renewable matte finish on the front face that allows the product to be continually rejuvenated if ever desired or necessary during the service life of the material. The back side of 3form Chroma in translucent colors is finished with a matte finish, but this side should not be renewed. Chroma Clear comes standard with renewable matte surfaces on front and back.

Chroma panels can be ordered with an optional Renewable Matte Back Finish, that allows refinishing of both sides of the panel. The Renewable Matte Back Finish increases the thickness by an extra 1/16" (1.5 mm).

Chroma panels that are opaque (unless specified differently) are finished with a gloss backside texture to allow for more versatility during fabrication. Chroma is also available with an optional Patent finish. Patent is a high gloss finish with the highest light transmittance, but does not allow for refinishing. (Chroma Reflect is not available with Patent finishes)

### PANEL SIZES AND TOLERANCES

All dimensions and squareness (standard or custom) are subject to a +1/4" or - 3/16" (+6 mm or -5 mm) tolerance. Squareness (standard or custom) is subject to a 1/8" (3.1 mm) tolerance.

Chroma is available in 1/4 inch (6.3 mm), 1/2 inch (12.7 mm), 1 inch (25.4 mm) and 2 inch (50.8 mm) thicknesses.

PANEL SIZE TABLE

| NOMINAL GAUGE | PANEL DIMENSIONS |
|---|---|
| 1/4" (6.3 mm) | 48" x 96" (122 cm x 243.8 cm), 48" x 120" (122 cm x 304.8 cm) |
| 1/2" (12.7 mm) | 48" x 96" (122 cm x 243.8 cm), 48" x 120" (122 cm x 304.8 cm) |
| 1" (25.4 mm) | 48" x 96" (122 cm x 243.8 cm), 48" x 120" (122 cm x 304.8 cm) |
| 2" (50.8 mm) | 48" x 96" (122 cm x 243.8 cm) |

Given the unique manufacturing process for 3form Chroma, a given gauge is subject to a +/- 10% thickness tolerance. Thickness values are based on measurements 2-3" (50-75 mm) from the edge, along both long edges of each panel.

THICKNESS TOLERANCE TABLE

STANDARD CHROMA, HIRES AND XT PANELS (XT NOT AVAILABLE IN 1/4")

| GAUGE* | MINIMUM ALLOWANCE | MAXIMUM ALLOWANCE |
|---|---|---|
| 1/4" (6.3 mm) | 0.200" (5.1 mm) | 0.335" (8.5 mm) |
| 1/2" (12.7 mm) | 0.450" (11.4 mm) | 0.585" (14.9 mm) |
| 1" (25.4 mm) | 0.900" (22.9 mm) | 1.100" (27.9 mm) |
| 2" (50.8 mm) | 1.800" (45.7 mm) | 2.200" (55.9 mm) |

REFLECT AND PANELS WITH RENEWABLE MATTE BACK FINISH

| GAUGE* | MINIMUM ALLOWANCE | MAXIMUM ALLOWANCE |
|---|---|---|
| 5/8" (15.9 mm) | 0.515" (13.1 mm) | 0.710" (18.0 mm) |
| 1-1/8" (28.6 mm) | 0.965" (24.5 mm) | 1.225" (31.1 mm) |
| 2-1/8" (53.9 mm) | 1.865" (47.4 mm) | 2.325" (59.1 mm) |

*Chroma Reflect adds 1/8" (3 mm) and renewable matte back finish materials add 1/16" (1.5 mm) to overall thickness.

### FLATNESS TOLERANCE

Chroma panels shall not have distortion in the form of a wrinkle, twist or scallop along the perimeter of the sheet. Overall warp in the form of a curve (bow warp) extending across the sheet is permitted to a maximum of 1/4" (6.3 mm) for each 48" (1.2 m), or fraction thereof. Panel is to be measured when laying horizontally under its own weight on a flat continuous surface.

# Specifications

### FLAMMABILITY & SMOKE TEST RESULTS
BUILDING CODE APPROVALS

3form Chroma conforms to the 2009 International Building Code® for light-transmitting plastics. The provisions of these codes provide adequate regulation for most applications of light-transmitting plastics [unless otherwise noted, data is based on 0.236" (6 mm) thickness]:

| TEST | 3FORM CHROMA | RESULT |
|---|---|---|
| ASTM D 2843 Smoke Density | 4.1% | PASS Less than 75 |
| ASTM D 635 Flame Spread | Rate of burning: 1.2 in/min | PASS CC2 |
| ASTM D 1929 Self-ignition Temp. | 852°F | PASS Greater than 650°F |
| ASTM E 84-03<br>Flame Spread, 1" Thickness<br>Smoke Developed | <br>115<br>150 | <br>Class C (76-200)<br>450 (less than 450) |

### PANEL WEIGHT

| THICKNESS (INCHES) | WEIGHT FLUX (LB/FT²) |
|---|---|
| 1/4" (6.3 mm) | 1.5 lb/ft² (7.3 kg/m²) |
| 1/2" (12.7 mm) | 3.1 lb/ft² (15.1 kg/m²) |
| 1" (25.4 mm) | 6.2 lb/ft² (30.2 kg/m²) |
| 2" (50.8 mm) | 12.4 lb/ft² (60.5 kg/m²) |

***Chroma XT panels weigh an additional 0.4 lb/lf² (1.9 kg/m²)**

****Chroma Reflect panels weigh an additional 0.8 lb/lf² (3.8 kg/m²)**

### EXPANSION/CONTRACTION ALLOWANCES

Like all resin products, 3form Chroma will expand and contract nominally with fluctuations in temperature. The following formula provides allowances that should be made in framed or fitted applications:

- Longest length of panel (inches) x temperature change of the sheet (°F) x 0.00004 =Amount of Linear Expansion/Contraction (inches)

**example:**

- A 48" x 96" panel that experiences a 50°F temperature change will expand/contract: 96 inches x 50 degrees x 0.00004 = 0.192 inches

Installers should take extra precautions if installation is occurring before the HVAC systems are operational. Allowances should also be made in the following situations:

- Fastening points
- Channel depths in frames
- Holes for standoffs and other hardware
- Meeting points for multiple sheets of 3form Chroma

### ETCHING

3form Chroma may be etched with two different finishing options to produce patterns, text, or anything imaginable. When etching, two different surface finishes may be specified: Polished and Renewable matte. Following are some limitations to the etching process:

Chroma XT products are not able to accept etching as the etching process creates part stress that could induce crazing.

Only 1/2"-2" Chroma may be etched.

- Limited to 1/8" deep
- Etch must be greater than 1/2" wide

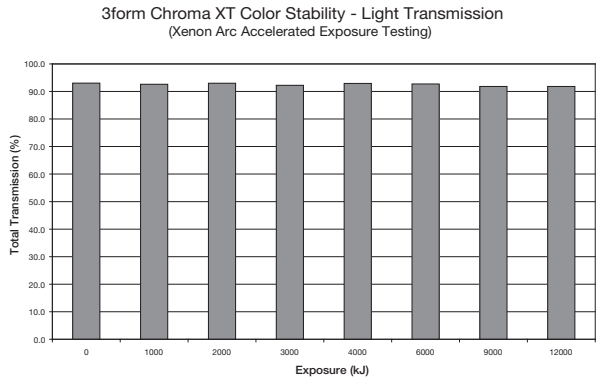
### UV EXPOSURE PERFORMANCE

Chroma XT is an excellent choice for exterior applications. The chart demonstrates that the change in light transmission remains unchanged. (12,000 kJ of exposure represents approximately 10 years of outdoor exposure in Florida) Should your application be for exterior use, please notify your 3form Sales Representative.

*Chroma Reflect cannot be used in exterior applications.

### USAGE LIMITATIONS

3form Chroma should never come in direct contact with metal fasteners. Non-metallic* gaskets, washers, and tubing are to be utilized in conjuntion with mechanical connections such as point supports and frames. Holes for fasteners must be located a minimum of 2" from the edge of




the hole to the edge of the panel.

Please contact the 3form Technical Help Line should you have any questions regarding the use of Chroma with mechanical fasteners.

*Gaskets, washers and tubing must be produced with a non-plasticized material. Suitable materials include: neoprene, teflon, nylon, silicone.

### DEFLECTION

3form Chroma will exhibit different amounts of deflection given a variety of factors: fastening techniques, loads, gauges and panel dimensions to list a few. Your 3form Representative can assist you with general deflection guidelines for your application using the Chroma Deflection Charts. If your application has specific engineering requirements, please contact the 3form Technical Help Desk for additional direction at 801-649-2670.

### HEAT FORMING/COLD BENDING

3form Chroma can be heated and formed to produce simple or even complex curves and shapes. The table below lists the minimum inner radius for a heat formed shape. Tighter radii may be possible, contact 3form Technical Service for details.

| THICKNESS | MINIMUM HEATFORMING RADIUS |
|---|---|
| 1/4" (6.3 mm) | 4" (101.6 mm) |
| 1/2" (12.7 mm) | 4" (101.6 mm) |
| 1" (25.4 mm) | 8" (203.2 mm) |
| 2" (50.8 mm) | 12" (304.8 mm) |

The optimal forming temperature ranges from 300º- 330ºF. Large and complex forming geometries should be specified to be produced by the 3form Fabrication experts.

**SPECIAL CONSIDERATIONS FOR THE HEAT-FORMING OF CHROMA HIGHRES.**

1/2" thickness only (Maximum finished sizes of 46" x 94" and 46" x 118")
Renewable Matte finishes only
No Complex Curves

Though 3form Chroma is commonly used in flat or heat curved applications, the polymeric nature of the material allows a minimal

amount of cold bending for a given panel. Cold bending is not possible on 1" and 2" gauges. The table below shows the minimum suggested radius for 3form Chroma at a given gauge:

| THICKNESS | MINIMUM BEND RADIUS |
|---|---|
| 0.250" (6.3 mm) | 150" (381 cm) |
| 0.500" (12.7 mm) | 225" (571 cm) |

### EDGE FINISHING

Edges of 3form Chroma panels are able to be machined or routed into a variety of different forms. In addition to a straight edge, edges may accept beveling, rounding, etc. Additional finishing, such as sanding or polishing, can also be provided to some edges.

### FABRICATION LIMITATIONS

Chroma Reflect requires special consideration during fabrication. When cutting panels using table saws or panels saws where the blade is situated below the panel, the back side (reflect side) of the panel needs to be facing UP. The back side of the panel should be facing down if it is being cut by a circular saw or a panel saw where the blade is above the panel.

Chroma reflect panels can be cut with a CNC router or a plunge router. Chroma Reflect MUST be scored with a 1/16" or 1/8" blade or tool before routing. All CNC cutting must be done from the back side. Chroma Reflect panels CAN NOT be cut with a jig saw or reciprocating saw.

### REFINISHING

One of the unique benefits of 3form Chroma is its ability to be refinished. If 3form Chroma needs to be refinished for any reason, the panels may be renewed by sanding. Make sure to sand the entire surface to obtain a uniform finish over the whole panel. Begin by dry sanding with a course grit paper (100 or 150 grit) to remove blemishes/scratches. Continue sanding with gradually finer grit papers until the surface is smooth and level and the blemish/scratches are removed. Complete the refinishing process by sanding with a 220 grit paper to attain a matte finish. Only the primary surface (non-colored side) is refinishable. After sanding, clean the surface with warm water and a mild detergent. Dry with a clean, cotton cloth and finish by treating the panel with Countertop Magic®. Even finer grit papers may be used to attain a satin or semi-polished appearance. With papers greater than 400 grit, wet sanding (with water) should be employed. Be sure to keep sanders in motion at all times when refinishing surfaces or edges. Only use light pressure with power sanders in order to maintain evenness and avoid overheating of the sheet surface.

### SOUND TRANSMISSION CLASS (STC) VALUES FOR CHROMA

Measurement protocol: ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

| THICKNESS | STC VALUES |
|---|---|
| 1/2" (12.7 mm) | 32 |
| 1" (25.4 mm) | 36 |

### THERMAL INSULATION VALUES FOR CHROMA

Insulation values are a function of both the convective properties (U-Values and shading coefficients) and the conductive properties (thermal conductivity).

| CHROMA RENEW/RENEW THICKNESS | WINTER U-VALUE (BTU/HR-FT²-°F) | SUMMER U-VALUE (BTU/HR-FT²-°F) |
|---|---|---|
| 1/2" (12.7 mm) | 0.82 | 0.81 |
| 1" (25.4 mm) | 0.65 | 0.65 |
| 2" (50.8 mm) | NOT TESTED | NOT TESTED |

## Select Mechanical and Physical Properties for 3form Chroma

| | | TYPICAL VALUES | |
|---|---|---|---|
| **PROPERTY** | **ASTM METHOD** | **US CUSTOM** | **METRIC** |
| **GENERAL** | | | |
| Density | D1505 | 1.19 g/cm$^3$ | 1.19 x 10$^{-3}$ kg/cm$^3$ |
| Water Absorption | D579 24hrs @ 73°F | 0.2% | 0.2% |
| **MECHANICAL** | | | |
| Tensile Strength | D638 | 10,000 psi | 69 MPa |
| Elongation at Rupture | D638 | 4.5% | 4.5% |
| Tensile Modulus | D638 | 400,000 psi | 2800 MPa |
| Flexural Strength (rupture) | D790 | 17,000 psi | 117 MPa |
| Flexural Modulus | D790 | 480,000 psi | 3300 MPa |
| Compressive Strength (yield) | D695 | 17,000 psi | 117 MPa |
| Compressive Deformation | D621 4000 psi, 122ºF, 24 hours) | ≤0.85% | |
| Shear Ultimate Strength | D732 | 10,000 psi | 703 kg/cm$^2$ |
| Shear Modulus | D5279 | 167,000 psi | 1151 MPa |
| Impact Strength (charpy method) | D256 notched | 2.1 lbf*in/in | 0.9 kgf*cm/cm |
| | D256 un-notched | 7 lbf*in/in | 3.17 kgf*cm/cm |
| Izod Impact Strength | D256 notched | ≤0.25 ft-lb/in | ≤13.3 J/m |
| Rockwell Hardness | D785 | M-93 | M-93 |
| Barcol Hardness | D2583 | 48 | 48 |
| Residual Shrinkage (internal strain) | D702 | 2% | 2% |
| Coefficient of Friction | D2047 dry<br>D2047 wet | 0.73<br>0.79 | |
| Poisson's Ratio | E132 | 0.35-0.40 | |
| **OPTICAL** | | | |
| Refractive Index | D542 | 1.49 | 1.49 |
| Light Transmission (total) | D1003 | 92% | 92% |
| Haze | D1003 | <1% | <1% |
| **THERMAL** | | | |
| Max Continuous Use Temperature | | 180ºF | 82ºC |
| Max Instantaneous Use Temperature | | 212ºF | 100ºC |
| Deflection Temperature | D648 @ 264 psi | 195ºF | 90ºC |
| Vicat Softening Point | D1525 | 239ºF | 115ºC |
| Forming Temperature | | 300-330ºF | 149-157ºC |
| Coefficient of Thermal Conductivity (k-factor) | cenco-fitch | 1.3 btu/(hr)ft$^2$(ºF) | 0.19 w/mºK |
| Coefficient of Thermal Expansion | D696 @ 60ºF (16ºC) | 4.0 x 10$^{-5}$(in/in/ºF) | 7.2 x 10$^{-5}$(mm/mm/ºC) |

## Chemical Resistance of 3form Chroma to Select Compounds

### 7 DAY FULL IMMERSION TESTING @ 73°F (23°C)

Polymer materials are affected by chemicals in different ways. Changes in performance or appearance when exposed to chemicals can be attributed to fabrication methods, exposure conditions, concentration of chemical substances or exposure duration. Such factors can even influence the final effect on substances that 3form Chroma is considered "Resistant" to under test conditions. Further details are explained below:

FABRICATION

Stresses generated from sanding, grinding, drilling, polishing, machining, sawing and/or forming (hot or cold).

EXPOSURE

Exposure duration, stresses imparted during the application life-cycle due to loads, temperature changes, heat, environments, etc.

APPLICATION OF CHEMICALS

Application from contact, rubbing, wiping, spraying, soaking, etc. Also having an affect is the relative concentration of the chemical in question.

The following table provides indicative performance of the chemical resistance characteristics of clear 3form Chroma panels. The following codes are used to describe the chemical resistance characteristics:

**R = RESISTANT**

3form Chroma is able to withstand the identified compound for long exposure periods. (7 days, full immersion)

**LR = LIMITED RESISTANCE**

3form Chroma is only resistant when in contact with this compound for short periods at room temperature. It is advised that further determination of the effect of the substance be further tested in your particular application.

**N = NOT RESISTANT**

3form Chroma is not resistant to the compound. The material will swell, craze, haze, dissolve or experience some physical change when exposed to this substance.

| REAGENT | RESULT | REAGENT | RESULT |
|---|---|---|---|
| acetic acid (5%) | R | hydrochloric acid | R |
| acetic acid (glacial) | N | hydrofluoric acid (40%) | N |
| acetic anhydride | LR | hydrogen peroxide (3%) | R |
| acetone | N | hydrogen peroxide (28%) | N |
| acrylic paints and lacquers | LR | iso octane | R |
| ammonia (aqueous solution) | R | isopropyl alcohol | LR |
| ammonium chloride (saturated) | R | kerosene | R |
| ammonium hydroxide (10%) | R | lacquer thinner | N |
| ammonium hydroxide (conc.) | R | lactic acid (80%) | LR |
| aniline | N | methane | R |
| battery Acid | R | methyl alcohol (50%) | LR |
| benzaldehyde | N | methyl alcohol (100%) | N |
| benzene | N | methyl ethyl ketone (MEK) | N |
| bituminous emulsion | N | methylene chloride | N |
| bleach (see sodium hypochlorite) | R | mineral oil | R |
| bromine | N | mortar | R |
| butanol | LR | motor fuel (benzene-free) | R |
| butyl acetate | N | motor fuel (with benzene) | N |
| calcium chloride (saturated) | R | muriatic acid (20%) | R |
| calcium hypochlorite | R | nitric acid (10%) | R |
| carbon tetrachloride | N | nitric acid (40%) | LR |
| cement | R | nitric acid (conc.) | N |
| chlorine water | LR | oil paints (pure) | R |
| chloroform | N | olive oil | R |
| chromic acid (40%) | N | oxygen | R |
| citric acid (10%) | R | ozone | R |
| cottonseed oil (edible) | R | phenol solution (5%) | N |
| detergent solution | R | phosphoric acid (10%) | R |
| diesel oil | R | plaster of paris | R |
| diethyl ether | N | soap solution (ivory) | R |
| dimethyl formamide | N | sodium carbonate (2%) | R |
| dioctyle formamide | N | sodium carbonate (20%) | R |
| ethyl acetate | N | sodium chloride (10%) | R |
| ethyl alcohol (50%) | LR | sodium hydroxide (1%) | R |
| ethyl alcohol (95%) | N | sodium hydroxide (10%) | R |
| ethyl dichloride | N | sodium hydroxide (60%) | R |
| ethylene gycol | R | sodium hypochlorite (5%) | R |
| 2-ethylhexyl sebacate | R | stearic acid | R |
| formaldehyde (40%) | R | sulfuric acid (3%) | R |
| formic acid (2%) | R | sulfuric acid (30%) | R |
| formic acid (40%) | LR | sulfuric acid (conc.) | N |
| gasoline (regular, leaded) | LR | thinners (general) | N |
| glycerine | R | toluene | N |
| glycerol | R | tricholoroethylene | N |
| glycol | R | turpentine | LR |
| heptane | R | urine | R |
| hexane | R | water (distilled) | R |
| hot bitumen | LR | xylene | N |

## Cleaning Instructions

3form Chroma, like all thermoplastic materials should be cleaned periodically. A regular cleaning program will help to maintain the aesthetics and life of the material. 3form recommends the use of Novus® No. 1 and Brillianize® plastic cleaners. Both products are specifically for use on plastics and help panels to resist finger-marking and static.

Rinse or wipe the sheet with lukewarm water. Remove dust and dirt from 3form Chroma with a damp, soft cloth or sponge and a solution of mild soap and/or liquid detergent in water. Rinse or wipe the 3form Chroma again thoroughly with lukewarm water. For more stubborn stains, dirty spots or grease, surface cleaners like Fantastik® or Formula 409® also work well. A scotch brite sponge can also help remove tough grease stains. After all cleaning steps, be sure to rinse thoroughly with lukewarm water.

Always use a soft, damp cloth to blot dry. Rubbing with a dry cloth can scratch the material and create a static charge. Never use scrapers or squeegees on 3form Chroma. Also avoid scouring compounds, gasoline, benzene, acetone, carbon tetrachloride, certain deicing fluids, lacquer thinner or other strong solvents.

**DO NOT:**

- Use squeegees or scrapers as they may scratch the sheet
- Use scouring compounds or solvents such as: acetone, gasoline, benzene, carbon tetrachloride, or lacquer thinner to clean the sheet
- Use abrasives or highline alkaline cleaners
- Use a dry cloth or a cloth of synthetic fiber such as rayon or polyester as they may scratch the sheet.
- Use Windex® or Glass Plus® cleaners

**DO:**

- Use warm water, mild detergent and a soft cloth or chamois
- Rinse surface thoroughly after cleaning with lukewarm water
- Blot dry with slightly damp, soft cloth or chamois

**IMPORTANT**

If a cleaning material is found to be incompatible in a short-term test, it will usually be found to be incompatible in the field. The converse, however, is not always true. Favorable performance is no guarantee that actual end-use conditions have been duplicated. Therefore, these results should be used as a guide only and it is recommended that the user test the products under actual end-use conditions.

For more information, please visit 3-form.com or call 877-649-2670.

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3form® chroma®

## Product Description

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Chroma XT is exterior grade Chroma suitable for use as signage, lighting, awnings, tables or canopies. Use Chroma XT to bring amazing color and design to your exterior applications.

### FEATURES AND BENEFITS

- Great for edge lighting – tremendous optical properties and high light transmission
- Rigid - stable and sturdy material for horizontal applications
- Qualifies for 3form Reclaim™ – keeping end-of-life material out of landfills
- Combine up to five colors to create any color imaginable
- Surface is able to be completely refinished to maintain product "newness"

### AVAILABLE COLORS

3form Chroma comes in a variety of translucent warm and cool colors. Colors can be made opaque with the addition of the color - White Out.

(Visit www.3-form.com for the complete list of available color options.)

CHROMA REFLECT

3form Chroma Reflect™ pairs beautiful 3form colors with a reflective opaque mirror. The result is a breathtaking panel that glows and radiates color like you've never seen. Chroma Reflect panels are 1-sided and opaque. Chroma Reflect can only be paired with one Chroma color. The back finish of Chroma Reflect is left unfinished to allow for more versatility during fabrication. Chroma Reflect adds an extra 1/8" (3 mm) to the standard thickness of Chroma panels. Additionally, Chroma Reflect is not suitable for exterior use and requires special fabrication techniques.

### TEXTURES/PATTERNS/FINISHES

All Chroma sheets come standard with a Renewable matte finish on the front face that allows the product to be continually rejuvenated if ever desired or necessary during the service life of the material. The back side of 3form Chroma in translucent colors is finished with a matte finish, but this side should not be renewed. Chroma Clear comes standard with renewable matte surfaces on front and back.

Chroma panels can be ordered with an optional Renewable Matte Back Finish, that allows refinishing of both sides of the panel. The Renewable Matte Back Finish increases the thickness by an extra 1/16" (1.5 mm).

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### PANEL SIZES AND TOLERANCES

All dimensions and squareness (standard or custom) are subject to a +1/4" or - 3/16" (+6 mm or -5 mm) tolerance. Squareness (standard or custom) is subject to a 1/8" (3.1 mm) tolerance.

Chroma is available in 1/4 inch (6.3 mm), 1/2 inch (12.7 mm), 1 inch (25.4 mm) and 2 inch (50.8 mm) thicknesses.

PANEL SIZE TABLE

| NOMINAL GAUGE | PANEL DIMENSIONS |
|---|---|
| 1/4" (6.3 mm) | 48" x 96" (122 cm x 243.8 cm), 48" x 120" (122 cm x 304.8 cm) |
| 1/2" (12.7 mm) | 48" x 96" (122 cm x 243.8 cm), 48" x 120" (122 cm x 304.8 cm) |
| 1" (25.4 mm) | 48" x 96" (122 cm x 243.8 cm), 48" x 120" (122 cm x 304.8 cm) |
| 2" (50.8 mm) | 48" x 96" (122 cm x 243.8 cm) |

Given the unique manufacturing process for 3form Chroma, a given gauge is subject to a +/- 10% thickness tolerance. Thickness values are based on measurements 2-3" (50-75 mm) from the edge, along both long edges of each panel.

THICKNESS TOLERANCE TABLE

STANDARD CHROMA, HIRES AND XT PANELS (XT NOT AVAILABLE IN 1/4")

| GAUGE* | MINIMUM ALLOWANCE | MAXIMUM ALLOWANCE |
|---|---|---|
| 1/4" (6.3 mm) | 0.200" (5.1 mm) | 0.335" (8.5 mm) |
| 1/2" (12.7 mm) | 0.450" (11.4 mm) | 0.585" (14.9 mm) |
| 1" (25.4 mm) | 0.900" (22.9 mm) | 1.100" (27.9 mm) |
| 2" (50.8 mm) | 1.800" (45.7 mm) | 2.200" (55.9 mm) |

REFLECT AND PANELS WITH RENEWABLE MATTE BACK FINISH

| GAUGE* | MINIMUM ALLOWANCE | MAXIMUM ALLOWANCE |
|---|---|---|
| 5/8" (15.9 mm) | 0.515" (13.1 mm) | 0.710" (18.0 mm) |
| 1-1/8" (28.6 mm) | 0.965" (24.5 mm) | 1.225" (31.1 mm) |
| 2-1/8" (53.9 mm) | 1.865" (47.4 mm) | 2.325" (59.1 mm) |

*Chroma Reflect adds 1/8" (3 mm) and renewable matte back finish materials add 1/16" (1.5 mm) to overall thickness.

### FLATNESS TOLERANCE

Chroma panels shall not have distortion in the form of a wrinkle, twist or scallop along the perimeter of the sheet. Overall warp in the form of a curve (bow warp) extending across the sheet is permitted to a maximum of 1/4" (6.3 mm) for each 48" (1.2 m), or fraction thereof. Panel is to be measured when laying horizontally under its own weight on a flat continuous surface.

# Specifications

### FLAMMABILITY & SMOKE TEST RESULTS
BUILDING CODE APPROVALS

3form Chroma conforms to the 2009 International Building Code® for light-transmitting plastics. The provisions of these codes provide adequate regulation for most applications of light-transmitting plastics [unless otherwise noted, data is based on 0.236" (6 mm) thickness]:

| TEST | 3FORM CHROMA | RESULT |
|---|---|---|
| ASTM D 2843 Smoke Density | 4.1% | PASS Less than 75 |
| ASTM D 635 Flame Spread | Rate of burning: 1.2 in/min | PASS CC2 |
| ASTM D 1929 Self-ignition Temp. | 852°F | PASS Greater than 650°F |
| ASTM E 84-03<br>Flame Spread, 1" Thickness<br>Smoke Developed | <br>115<br>150 | <br>Class C (76-200)<br>450 (less than 450) |

### PANEL WEIGHT

| THICKNESS (INCHES) | WEIGHT FLUX (LB/FT²) |
|---|---|
| 1/4" (6.3 mm) | 1.5 lb/ft² (7.3 kg/m²) |
| 1/2" (12.7 mm) | 3.1 lb/ft² (15.1 kg/m²) |
| 1" (25.4 mm) | 6.2 lb/ft² (30.2 kg/m²) |
| 2" (50.8 mm) | 12.4 lb/ft² (60.5 kg/m²) |

***Chroma XT panels weigh an additional 0.4 lb/lf² (1.9 kg/m²)**

****Chroma Reflect panels weigh an additional 0.8 lb/lf² (3.8 kg/m²)**

### EXPANSION/CONTRACTION ALLOWANCES

Like all resin products, 3form Chroma will expand and contract nominally with fluctuations in temperature. The following formula provides allowances that should be made in framed or fitted applications:

- Longest length of panel (inches) x temperature change of the sheet (°F) x 0.00004 =Amount of Linear Expansion/Contraction (inches)

**example:**

- A 48" x 96" panel that experiences a 50°F temperature change will expand/contract: 96 inches x 50 degrees x 0.00004 = 0.192 inches

Installers should take extra precautions if installation is occurring before the HVAC systems are operational. Allowances should also be made in the following situations:

- Fastening points
- Channel depths in frames
- Holes for standoffs and other hardware
- Meeting points for multiple sheets of 3form Chroma

### ETCHING

3form Chroma may be etched with two different finishing options to produce patterns, text, or anything imaginable. When etching, two different surface finishes may be specified: Polished and Renewable matte. Following are some limitations to the etching process:

Chroma XT products are not able to accept etching as the etching process creates part stress that could induce crazing.

Only 1/2"-2" Chroma may be etched.

- Limited to 1/8" deep
- Etch must be greater than 1/2" wide

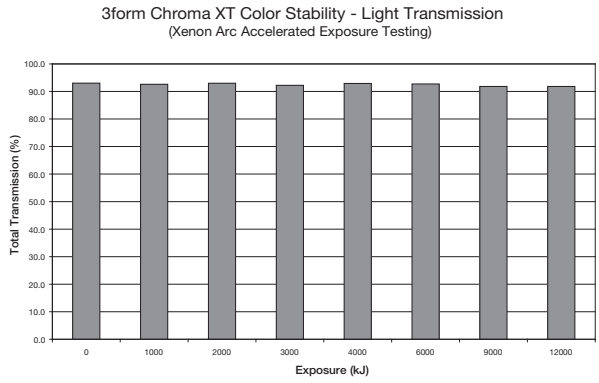
### UV EXPOSURE PERFORMANCE

Chroma XT is an excellent choice for exterior applications. The chart demonstrates that the change in light transmission remains unchanged. (12,000 kJ of exposure represents approximately 10 years of outdoor exposure in Florida) Should your application be for exterior use, please notify your 3form Sales Representative.

*Chroma Reflect cannot be used in exterior applications.

### USAGE LIMITATIONS

3form Chroma should never come in direct contact with metal fasteners. Non-metallic* gaskets, washers, and tubing are to be utilized in conjuntion with mechanical connections such as point supports and frames. Holes for fasteners must be located a minimum of 2" from the edge of




the hole to the edge of the panel.

Please contact the 3form Technical Help Line should you have any questions regarding the use of Chroma with mechanical fasteners.

*Gaskets, washers and tubing must be produced with a non-plasticized material. Suitable materials include: neoprene, teflon, nylon, silicone.

### DEFLECTION

3form Chroma will exhibit different amounts of deflection given a variety of factors: fastening techniques, loads, gauges and panel dimensions to list a few. Your 3form Representative can assist you with general deflection guidelines for your application using the Chroma Deflection Charts. If your application has specific engineering requirements, please contact the 3form Technical Help Desk for additional direction at 801-649-2670.

### HEAT FORMING/COLD BENDING

3form Chroma can be heated and formed to produce simple or even complex curves and shapes. The table below lists the minimum inner radius for a heat formed shape. Tighter radii may be possible, contact 3form Technical Service for details.

| THICKNESS | MINIMUM HEATFORMING RADIUS |
|---|---|
| 1/4" (6.3 mm) | 4" (101.6 mm) |
| 1/2" (12.7 mm) | 4" (101.6 mm) |
| 1" (25.4 mm) | 8" (203.2 mm) |
| 2" (50.8 mm) | 12" (304.8 mm) |

The optimal forming temperature ranges from 300º- 330ºF. Large and complex forming geometries should be specified to be produced by the 3form Fabrication experts.

**SPECIAL CONSIDERATIONS FOR THE HEAT-FORMING OF CHROMA HIGHRES.**

1/2" thickness only (Maximum finished sizes of 46" x 94" and 46" x 118")
Renewable Matte finishes only
No Complex Curves

Though 3form Chroma is commonly used in flat or heat curved applications, the polymeric nature of the material allows a minimal

amount of cold bending for a given panel. Cold bending is not possible on 1" and 2" gauges. The table below shows the minimum suggested radius for 3form Chroma at a given gauge:

| THICKNESS | MINIMUM BEND RADIUS |
|---|---|
| 0.250" (6.3 mm) | 150" (381 cm) |
| 0.500" (12.7 mm) | 225" (571 cm) |

### EDGE FINISHING

Edges of 3form Chroma panels are able to be machined or routed into a variety of different forms. In addition to a straight edge, edges may accept beveling, rounding, etc. Additional finishing, such as sanding or polishing, can also be provided to some edges.

### FABRICATION LIMITATIONS

Chroma Reflect requires special consideration during fabrication. When cutting panels using table saws or panels saws where the blade is situated below the panel, the back side (reflect side) of the panel needs to be facing UP. The back side of the panel should be facing down if it is being cut by a circular saw or a panel saw where the blade is above the panel.

Chroma reflect panels can be cut with a CNC router or a plunge router. Chroma Reflect MUST be scored with a 1/16" or 1/8" blade or tool before routing. All CNC cutting must be done from the back side. Chroma Reflect panels CAN NOT be cut with a jig saw or reciprocating saw.

### REFINISHING

One of the unique benefits of 3form Chroma is its ability to be refinished. If 3form Chroma needs to be refinished for any reason, the panels may be renewed by sanding. Make sure to sand the entire surface to obtain a uniform finish over the whole panel. Begin by dry sanding with a course grit paper (100 or 150 grit) to remove blemishes/scratches. Continue sanding with gradually finer grit papers until the surface is smooth and level and the blemish/scratches are removed. Complete the refinishing process by sanding with a 220 grit paper to attain a matte finish. Only the primary surface (non-colored side) is refinishable. After sanding, clean the surface with warm water and a mild detergent. Dry with a clean, cotton cloth and finish by treating the panel with Countertop Magic®. Even finer grit papers may be used to attain a satin or semi-polished appearance. With papers greater than 400 grit, wet sanding (with water) should be employed. Be sure to keep sanders in motion at all times when refinishing surfaces or edges. Only use light pressure with power sanders in order to maintain evenness and avoid overheating of the sheet surface.

### SOUND TRANSMISSION CLASS (STC) VALUES FOR CHROMA

Measurement protocol: ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

| THICKNESS | STC VALUES |
|---|---|
| 1/2" (12.7 mm) | 32 |
| 1" (25.4 mm) | 36 |

### THERMAL INSULATION VALUES FOR CHROMA

Insulation values are a function of both the convective properties (U-Values and shading coefficients) and the conductive properties (thermal conductivity).

| CHROMA RENEW/RENEW THICKNESS | WINTER U-VALUE (BTU/HR-FT²-°F) | SUMMER U-VALUE (BTU/HR-FT²-°F) |
|---|---|---|
| 1/2" (12.7 mm) | 0.82 | 0.81 |
| 1" (25.4 mm) | 0.65 | 0.65 |
| 2" (50.8 mm) | NOT TESTED | NOT TESTED |

## Select Mechanical and Physical Properties for 3form Chroma

| | | TYPICAL VALUES | |
|---|---|---|---|
| **PROPERTY** | **ASTM METHOD** | **US CUSTOM** | **METRIC** |
| **GENERAL** | | | |
| Density | D1505 | 1.19 g/cm$^3$ | 1.19 x 10$^{-3}$ kg/cm$^3$ |
| Water Absorption | D579 24hrs @ 73°F | 0.2% | 0.2% |
| **MECHANICAL** | | | |
| Tensile Strength | D638 | 10,000 psi | 69 MPa |
| Elongation at Rupture | D638 | 4.5% | 4.5% |
| Tensile Modulus | D638 | 400,000 psi | 2800 MPa |
| Flexural Strength (rupture) | D790 | 17,000 psi | 117 MPa |
| Flexural Modulus | D790 | 480,000 psi | 3300 MPa |
| Compressive Strength (yield) | D695 | 17,000 psi | 117 MPa |
| Compressive Deformation | D621 4000 psi, 122ºF, 24 hours) | ≤0.85% | |
| Shear Ultimate Strength | D732 | 10,000 psi | 703 kg/cm$^2$ |
| Shear Modulus | D5279 | 167,000 psi | 1151 MPa |
| Impact Strength (charpy method) | D256 notched | 2.1 lbf*in/in | 0.9 kgf*cm/cm |
| | D256 un-notched | 7 lbf*in/in | 3.17 kgf*cm/cm |
| Izod Impact Strength | D256 notched | ≤0.25 ft-lb/in | ≤13.3 J/m |
| Rockwell Hardness | D785 | M-93 | M-93 |
| Barcol Hardness | D2583 | 48 | 48 |
| Residual Shrinkage (internal strain) | D702 | 2% | 2% |
| Coefficient of Friction | D2047 dry<br>D2047 wet | 0.73<br>0.79 | |
| Poisson's Ratio | E132 | 0.35-0.40 | |
| **OPTICAL** | | | |
| Refractive Index | D542 | 1.49 | 1.49 |
| Light Transmission (total) | D1003 | 92% | 92% |
| Haze | D1003 | <1% | <1% |
| **THERMAL** | | | |
| Max Continuous Use Temperature | | 180ºF | 82ºC |
| Max Instantaneous Use Temperature | | 212ºF | 100ºC |
| Deflection Temperature | D648 @ 264 psi | 195ºF | 90ºC |
| Vicat Softening Point | D1525 | 239ºF | 115ºC |
| Forming Temperature | | 300-330ºF | 149-157ºC |
| Coefficient of Thermal Conductivity (k-factor) | cenco-fitch | 1.3 btu/(hr)ft$^2$(ºF) | 0.19 w/mºK |
| Coefficient of Thermal Expansion | D696 @ 60ºF (16ºC) | 4.0 x 10$^{-5}$(in/in/ºF) | 7.2 x 10$^{-5}$(mm/mm/ºC) |

## Chemical Resistance of 3form Chroma to Select Compounds

### 7 DAY FULL IMMERSION TESTING @ 73°F (23°C)

Polymer materials are affected by chemicals in different ways. Changes in performance or appearance when exposed to chemicals can be attributed to fabrication methods, exposure conditions, concentration of chemical substances or exposure duration. Such factors can even influence the final effect on substances that 3form Chroma is considered "Resistant" to under test conditions. Further details are explained below:

FABRICATION

Stresses generated from sanding, grinding, drilling, polishing, machining, sawing and/or forming (hot or cold).

EXPOSURE

Exposure duration, stresses imparted during the application life-cycle due to loads, temperature changes, heat, environments, etc.

APPLICATION OF CHEMICALS

Application from contact, rubbing, wiping, spraying, soaking, etc. Also having an affect is the relative concentration of the chemical in question.

The following table provides indicative performance of the chemical resistance characteristics of clear 3form Chroma panels. The following codes are used to describe the chemical resistance characteristics:

**R = RESISTANT**

3form Chroma is able to withstand the identified compound for long exposure periods. (7 days, full immersion)

**LR = LIMITED RESISTANCE**

3form Chroma is only resistant when in contact with this compound for short periods at room temperature. It is advised that further determination of the effect of the substance be further tested in your particular application.

**N = NOT RESISTANT**

3form Chroma is not resistant to the compound. The material will swell, craze, haze, dissolve or experience some physical change when exposed to this substance.

| REAGENT | RESULT | REAGENT | RESULT |
|---|---|---|---|
| acetic acid (5%) | R | hydrochloric acid | R |
| acetic acid (glacial) | N | hydrofluoric acid (40%) | N |
| acetic anhydride | LR | hydrogen peroxide (3%) | R |
| acetone | N | hydrogen peroxide (28%) | N |
| acrylic paints and lacquers | LR | iso octane | R |
| ammonia (aqueous solution) | R | isopropyl alcohol | LR |
| ammonium chloride (saturated) | R | kerosene | R |
| ammonium hydroxide (10%) | R | lacquer thinner | N |
| ammonium hydroxide (conc.) | R | lactic acid (80%) | LR |
| aniline | N | methane | R |
| battery Acid | R | methyl alcohol (50%) | LR |
| benzaldehyde | N | methyl alcohol (100%) | N |
| benzene | N | methyl ethyl ketone (MEK) | N |
| bituminous emulsion | N | methylene chloride | N |
| bleach (see sodium hypochlorite) | R | mineral oil | R |
| bromine | N | mortar | R |
| butanol | LR | motor fuel (benzene-free) | R |
| butyl acetate | N | motor fuel (with benzene) | N |
| calcium chloride (saturated) | R | muriatic acid (20%) | R |
| calcium hypochlorite | R | nitric acid (10%) | R |
| carbon tetrachloride | N | nitric acid (40%) | LR |
| cement | R | nitric acid (conc.) | N |
| chlorine water | LR | oil paints (pure) | R |
| chloroform | N | olive oil | R |
| chromic acid (40%) | N | oxygen | R |
| citric acid (10%) | R | ozone | R |
| cottonseed oil (edible) | R | phenol solution (5%) | N |
| detergent solution | R | phosphoric acid (10%) | R |
| diesel oil | R | plaster of paris | R |
| diethyl ether | N | soap solution (ivory) | R |
| dimethyl formamide | N | sodium carbonate (2%) | R |
| dioctyle formamide | N | sodium carbonate (20%) | R |
| ethyl acetate | N | sodium chloride (10%) | R |
| ethyl alcohol (50%) | LR | sodium hydroxide (1%) | R |
| ethyl alcohol (95%) | N | sodium hydroxide (10%) | R |
| ethyl dichloride | N | sodium hydroxide (60%) | R |
| ethylene gycol | R | sodium hypochlorite (5%) | R |
| 2-ethylhexyl sebacate | R | stearic acid | R |
| formaldehyde (40%) | R | sulfuric acid (3%) | R |
| formic acid (2%) | R | sulfuric acid (30%) | R |
| formic acid (40%) | LR | sulfuric acid (conc.) | N |
| gasoline (regular, leaded) | LR | thinners (general) | N |
| glycerine | R | toluene | N |
| glycerol | R | tricholoroethylene | N |
| glycol | R | turpentine | LR |
| heptane | R | urine | R |
| hexane | R | water (distilled) | R |
| hot bitumen | LR | xylene | N |

## Cleaning Instructions

3form Chroma, like all thermoplastic materials should be cleaned periodically. A regular cleaning program will help to maintain the aesthetics and life of the material. 3form recommends the use of Novus® No. 1 and Brillianize® plastic cleaners. Both products are specifically for use on plastics and help panels to resist finger-marking and static.

Rinse or wipe the sheet with lukewarm water. Remove dust and dirt from 3form Chroma with a damp, soft cloth or sponge and a solution of mild soap and/or liquid detergent in water. Rinse or wipe the 3form Chroma again thoroughly with lukewarm water. For more stubborn stains, dirty spots or grease, surface cleaners like Fantastik® or Formula 409® also work well. A scotch brite sponge can also help remove tough grease stains. After all cleaning steps, be sure to rinse thoroughly with lukewarm water.

Always use a soft, damp cloth to blot dry. Rubbing with a dry cloth can scratch the material and create a static charge. Never use scrapers or squeegees on 3form Chroma. Also avoid scouring compounds, gasoline, benzene, acetone, carbon tetrachloride, certain deicing fluids, lacquer thinner or other strong solvents.

**DO NOT:**

- Use squeegees or scrapers as they may scratch the sheet
- Use scouring compounds or solvents such as: acetone, gasoline, benzene, carbon tetrachloride, or lacquer thinner to clean the sheet
- Use abrasives or highline alkaline cleaners
- Use a dry cloth or a cloth of synthetic fiber such as rayon or polyester as they may scratch the sheet.
- Use Windex® or Glass Plus® cleaners

**DO:**

- Use warm water, mild detergent and a soft cloth or chamois
- Rinse surface thoroughly after cleaning with lukewarm water
- Blot dry with slightly damp, soft cloth or chamois

**IMPORTANT**

If a cleaning material is found to be incompatible in a short-term test, it will usually be found to be incompatible in the field. The converse, however, is not always true. Favorable performance is no guarantee that actual end-use conditions have been duplicated. Therefore, these results should be used as a guide only and it is recommended that the user test the products under actual end-use conditions.

For more information, please visit 3-form.com or call 877-649-2670.

## ENVIRONMENTALLY FRIENDLY, ENERGY EFFICIENT

- Comparable light output to 26W, 32W, 42W and 2x26W CFL while consuming 18, 21, 31 and 46 watts.
- No harmful ultraviolet or infrared wavelengths
- No lead or mercury

# 9" 1100/1300/2000/2800 LUMEN LED DOWNLIGHT CYLINDER

OPEN APERTURE

**9-LED SERIES**

Type Cat. No.

Project:

Notes:

## PRODUCT SPECIFICATIONS

### Optics

**Cone:** Self-flanged, low iridescent satin or specular Alzak® cone standard • Cone available in clear, gold, black, pewter, wheat, and bronze Alzak® finishes; see trim options • Computer-optimized reflector maximizes fixture efficiency • Deep regression of source produces a very low glare system with 40° cut-off to lamp and lamp image • Lensed mixing chamber conceals the LEDs to produce uniform aperture luminance

### Electrical

**LED Light Engine:** Innovative light engine utilizes remote phosphor lens and mixing chamber to ensure perfectly mixed light, resulting in uniform colors and superior color consistency from fixture to fixture • 2700K, 3000K, 3500K and 4100K color temperatures available • CRI>80 • Cast aluminum heat sink integrated directly with housing provides superior thermal management with LEDs operating below manufacturer's published junction temperature to ensure attainment of rated life of the LEDs • Light engine mounts directly to heat sink and is easily replaceable • Light engine/reflector system produces 900 to 2500 lumens while using only 18 to 46 watts of energy and incorporates the latest generation of high lumen LEDs.

**Dimming:** Dimmable via 0-10V protocol, increasing efficiency up to 30% while dimming • For a list of compatible dimmers, see LED-DIM.

**LED Driver:** Universal driver accommodates 120V to 277V input volts AC at 50/60Hz, 2800 lumen unit is voltage specific • Power factor >0.9 • Dimmable via 0-10V protocol, increasing efficiency up to 30% while dimming

**Life:** Rated for 50,000 hours at 70% lumen maintenance

### Mechanical

**Housing:** One piece heavy gauge steel with white or black baked textured powder coat finish.

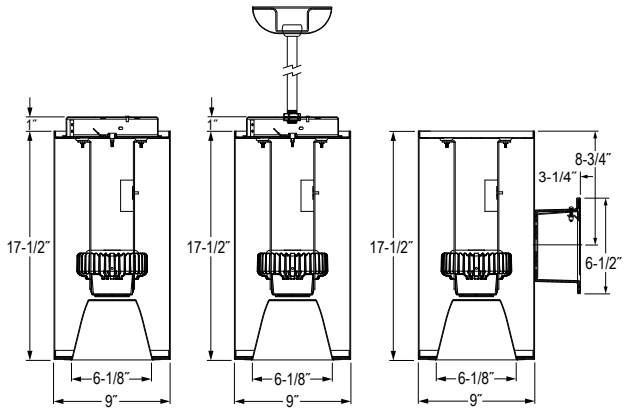
**Mounting:** Available for surface, pendant or wall mounting • Pendant mounting features hang straight pendant mounting kits that allows for mounting on to sloped ceiling with an angle up to 45° • Hinged reveal allows single person installation.

### Labels and Listings

- UL listed for damp locations • I.B.E.W. Union made
- UL and cUL, RoHS complaint • EMI complies with FCC 47, Part 15, Class A
- Energy Star qualified, page 2 for designated products
- ARRA compliant

**Warranty:** 5 years when used in accordance with manufacturing guidelines. Product specifications subject to change without notice.

## DIMENSIONS




## ENGINEERING DATA

| Voltage | 120V - 277V | | | |
|---|---|---|---|---|
| Light Engine Lumens | 1100 | 1300 | 2000 | 2800 |
| CCT | 4K/35K/3K/27K | 4K/35K/3K/27K | 4K/35K/3K/27K | 4K/35K/3K/27K |
| Input Wattage | 18W/18W/19W/19W | 20W/21W/22W/22W | 30W/31W/33W/33W | 46W/46W/49W/49W |
| Input Frequency | 50/60Hz | 50/60Hz | 50/60Hz | 50/60Hz |
| Power Factor | 0.9 | 0.9 | 0.9 | 0.9 |

347 Volt available, consult factory.

## ORDERING INFORMATION: Rough-in, reflector and accessories each ordered separately.

Examples: **9-LED-1327W-CS3 / 9-LED-1135W-CL3-WH / 9-LED-13402B-GS3-PD**

| Cat. # | Lumens | Color Temp. | ♦Voltage | Housing Color | Trim Options | Generation | Options |
|---|---|---|---|---|---|---|---|
| | - | | | * | - | | 3 - |

**9-LED** Surface Mount
**9P-LED** ▪ Pendant Mount
**9B-LED** Wall Mount

| Lumens | Color Temp. | ♦Voltage |
|---|---|---|
| 11 1100 | 27 2700K | 1 120V |
| 13 1300 | 30 3000K | 2 277V |
| 20 2000 | 35 3500K | 3 347V |
| ♦28 2800 | 40 4100K | |

**W** White
**B** Black

**Alzak® Finish Options:**

| | Satin | Specular |
|---|---|---|
| Clear | CS | CL |
| Gold | GS | GL |
| Black | BS | BL |
| Pewter | PTS | PTL |
| Wheat | WTS | WTL |
| Bronze | BZS | BZL |

**Painted Finish Options**

White W

| | |
|---|---|
| **WH** | White Flange |
| **WS** | Single Wall Wash |
| **BP** | Emergency Battery Pack w/ Test switch (Battery & test switch remotely mounted) |
| **347** | 347 Volt (1100/1300/2000 lumen units only) |
| †**R1** | Reverse Phase Dimming (1100/1300/2000Lm, 120V only) *STD. on 2800 Lumen/120V |
| **D1** | DALI Conrol Dimming (1100/1300Lm, 120V only) |
| **PD** | Lutron Dimming Driver (1100, 1300Lm Only) |

Example: **P24-W**

**Pendant Kits/Accessories**

| | |
|---|---|
| **P18-W** | 18" Hang Straight Mounting Kit, White |
| **P18-B** | 18" Hang Straight Mounting Kit, Black |
| **P24-W** | 24" Hang Straight Mounting Kit, White |
| **P24-B** | 24" Hang Straight Mounting Kit, Black |
| **P36-W** | 36" Hang Straight Mounting Kit, White |
| **P36-B** | 36" Hang Straight Mounting Kit, Black |
| **DM** | For (0-10V) standard Dimming Example: **-P24-W-DM** |
| **DM-PD** | For use with Lutron Dimming Driver option. Example: **-P24-W-DM-PD** |
| **DM-D1** | For use with Dali Control option Example: **-P24-W-DM-D1** |
| **BP-FRTM** | For Battery Pack add **'-BP-FRTM'** to Pendant Kit. Example: **-P24-W-BP-FRTM** |

♦2800 Lumen unit is voltage specific, all others are universal voltage.

▪See accessories for pendant mounting of fixtures with dimming or emergency battery pack.

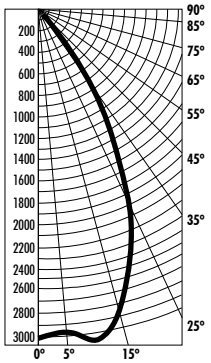
†R1 Uses standard stem accessories

Rev. 1 09/13

Juno Lighting Group by Schneider Electric
1300 South Wolf Road • Des Plaines, Illinois 60018
PHONE 800-367-5866 • FAX 888-708-6578
www.junolightinggroup.com

## 2700K, 3000K, 3500K & 4100K CCT

**Catalog Number: 9-LED-28351W-CL3**
PHOTOMETRIC REPORT
**Test Number:** PR10121883
**Total Lumen Output:** 2559 Lumens
**Luminaire Efficacy:** 52.2 lm/w (2700K), 52.2 lm/w (3000K)
55.6 lm/w (3500K), 55.6 lm/w (4100K)
**Luminaire Spacing Criteria:** 0.89
**Luminaire:** Clear specular Alzak® reflector. Open bottom.
**CIE-Type:** Direct




### Candlepower Distribution
(Candelas)

| Angle | Candela | Lumens |
|---|---|---|
| 0° | 3009 | |
| 5° | 2966 | 283 |
| 15° | 2870 | 813 |
| 25° | 2009 | 930 |
| 35° | 809 | 508 |
| 45° | 10 | 8 |
| 55° | 0 | 0 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |

Lumen Multiplier: 2000 x 0.69
1300 x 0.45
1100 x 0.39

### Initial Footcandles

| Distance to Illuminated Plane (Feet) | Footcandles Beam Center | Footcandles Beam Edge | Beam Diameter |
|---|---|---|---|
| 6′ | 83.6 | 29.0 | 6.6′ |
| 7′ | 61.4 | 21.3 | 7.7′ |
| 8′ | 47.0 | 16.3 | 8.8′ |
| 9′ | 37.1 | 12.9 | 9.9′ |
| 10′ | 30.1 | 10.4 | 11.0′ |
| 11′ | 24.9 | 8.6 | 12.1′ |
| 12′ | 20.9 | 7.2 | 13.2′ |
| 13′ | 17.8 | 6.2 | 14.2′ |
| 14′ | 15.4 | 5.3 | 15.3′ |
| 15′ | 13.4 | 4.6 | 16.4′ |

### Luminance Data

| Angle in Degrees | Candela/M² |
|---|---|
| 45° | 783 |
| 55° | 201 |
| 65° | 670 |
| 75° | 787 |
| 85° | 2922 |

### Zonal Lumen Summary

| Zone | Lumens% | %Fixture |
|---|---|---|
| 0-30° | 2026 | 79.2 |
| 0-40° | 2535 | 99.1 |
| 0-60° | 2545 | 99.4 |
| 0-90° | 2559 | 100.0 |
| 90-180° | 0 | 0.0 |
| 0-180° | 2559 | 100.0 |

### AVERAGE INITIAL FOOTCANDLES
Reflectances: 80% Ceiling, 50% Walls, 30% Floors

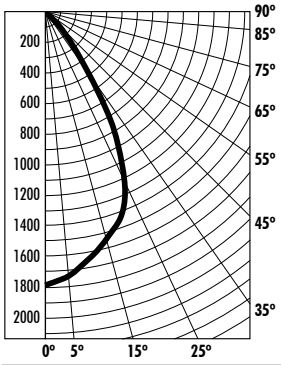
| Luminaire Spacing | Room Cavity Ratio RCR1 | RCR4 | RCR8 |
|---|---|---|---|
| 5′ x 5′ | 114 | 94 | 75 |
| 6′ x 6′ | 79 | 65 | 52 |
| 7′ x 7′ | 58 | 48 | 38 |
| 8′ x 8′ | 44 | 37 | 29 |
| 9′ x 9′ | 35 | 29 | 23 |
| 10′ x 10′ | 28 | 24 | 19 |
| 11′ x 11′ | 23 | 19 | 15 |
| 12′ x 12′ | 20 | 16 | 13 |

### COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)
Effective Floor Reflectance 20%

| PCC | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 114 | 111 | 109 | 107 | 111 | 109 | 107 | 105 | 105 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | 94 |
| 2 | 108 | 104 | 100 | 97 | 106 | 102 | 99 | 96 | 99 | 96 | 94 | 96 | 94 | 92 | 93 | 91 | 90 | 88 |
| 3 | 103 | 97 | 93 | 89 | 101 | 96 | 92 | 88 | 93 | 90 | 87 | 91 | 88 | 95 | 89 | 86 | 84 | 83 |
| 4 | 99 | 91 | 86 | 82 | 97 | 90 | 85 | 82 | 88 | 84 | 81 | 86 | 83 | 80 | 84 | 81 | 79 | 77 |
| 5 | 94 | 86 | 81 | 76 | 92 | 85 | 80 | 76 | 83 | 79 | 75 | 82 | 78 | 75 | 80 | 77 | 74 | 73 |
| 6 | 90 | 81 | 76 | 71 | 88 | 80 | 75 | 71 | 79 | 74 | 71 | 78 | 73 | 70 | 76 | 73 | 70 | 68 |
| 7 | 85 | 77 | 71 | 67 | 84 | 76 | 71 | 67 | 75 | 70 | 66 | 74 | 69 | 66 | 72 | 69 | 66 | 64 |
| 8 | 82 | 73 | 67 | 63 | 80 | 72 | 67 | 63 | 71 | 66 | 63 | 70 | 65 | 62 | 69 | 65 | 62 | 61 |
| 9 | 78 | 69 | 63 | 59 | 77 | 68 | 63 | 59 | 67 | 62 | 59 | 66 | 62 | 59 | 66 | 62 | 59 | 57 |
| 10 | 74 | 65 | 60 | 56 | 73 | 65 | 60 | 56 | 64 | 59 | 56 | 63 | 59 | 56 | 63 | 58 | 55 | 54 |

## 2700K, 3000K, 3500K & 4100K CCT

**Catalog Number: 9-LED-2035W-CS3**
PHOTOMETRIC REPORT
**Test Number:** PR10121891
**Total Lumen Output:** 1603 Lumens
**Luminaire Efficacy:** 48.6 lm/w (2700K), 48.6 lm/w (3000K)
51.5 lm/w (3500K), 53.4 lm/w (4100K)
**Luminaire Spacing Criteria:** 0.94
**Luminaire:** Clear satin Alzak® reflector. Open bottom.
**CIE-Type:** Direct




### Candlepower Distribution
(Candelas)

| Angle | Candela | Lumens |
|---|---|---|
| 0° | 1795 | |
| 5° | 1749 | 167 |
| 15° | 1535 | 435 |
| 25° | 1220 | 565 |
| 35° | 514 | 323 |
| 45° | 111 | 86 |
| 55° | 22 | 20 |
| 65° | 3 | 3 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |

Lumen Multiplier: 2800 x 1.44
1300 x 0.64
1100 x 0.55

### Initial Footcandles

| Distance to Illuminated Plane (Feet) | Footcandles Beam Center | Footcandles Beam Edge | Beam Diameter |
|---|---|---|---|
| 6′ | 49.9 | 16.3 | 6.9′ |
| 7′ | 36.6 | 12.0 | 8.0′ |
| 8′ | 28.0 | 9.2 | 9.2′ |
| 9′ | 22.2 | 7.2 | 10.3′ |
| 10′ | 18.0 | 5.9 | 11.4′ |
| 11′ | 14.8 | 4.9 | 12.6′ |
| 12′ | 12.5 | 4.1 | 13.7′ |
| 13′ | 10.6 | 3.5 | 14.9′ |
| 14′ | 9.2 | 3.0 | 16.0′ |
| 15′ | 8.0 | 2.6 | 17.2′ |

### Luminance Data

| Angle in Degrees | Candela/M² |
|---|---|
| 45° | 8636 |
| 55° | 2100 |
| 65° | 396 |
| 75° | 0 |
| 85° | 2326 |

### Zonal Lumen Summary

| Zone | Lumens% | %Fixture |
|---|---|---|
| 0-30° | 1167 | 72.8 |
| 0-40° | 1490 | 92.9 |
| 0-60° | 1596 | 99.6 |
| 0-90° | 1603 | 100.0 |
| 90-180° | 0 | 0.0 |
| 0-180° | 1603 | 100.0 |

### AVERAGE INITIAL FOOTCANDLES
Reflectances: 80% Ceiling, 50% Walls, 30% Floors

| Luminaire Spacing | Room Cavity Ratio RCR1 | RCR4 | RCR8 |
|---|---|---|---|
| 5′ x 5′ | 71 | 58 | 45 |
| 6′ x 6′ | 49 | 40 | 31 |
| 7′ x 7′ | 36 | 29 | 23 |
| 8′ x 8′ | 28 | 23 | 18 |
| 9′ x 9′ | 22 | 18 | 14 |
| 10′ x 10′ | 18 | 14 | 11 |
| 11′ x 11′ | 15 | 12 | 9 |
| 12′ x 12′ | 12 | 10 | 8 |

### COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)
Effective Floor Reflectance 20%

| PCC | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 113 | 111 | 108 | 106 | 111 | 109 | 106 | 104 | 104 | 103 | 101 | 101 | 99 | 98 | 97 | 96 | 95 | 93 |
| 2 | 108 | 103 | 99 | 96 | 106 | 101 | 98 | 94 | 98 | 95 | 92 | 95 | 93 | 90 | 92 | 90 | 89 | 87 |
| 3 | 102 | 96 | 91 | 87 | 100 | 95 | 90 | 86 | 92 | 88 | 85 | 90 | 86 | 84 | 87 | 85 | 82 | 81 |
| 4 | 97 | 90 | 84 | 80 | 95 | 88 | 83 | 79 | 86 | 82 | 78 | 84 | 81 | 78 | 82 | 79 | 77 | 75 |
| 5 | 92 | 84 | 78 | 74 | 91 | 83 | 77 | 73 | 81 | 76 | 73 | 79 | 75 | 72 | 78 | 74 | 71 | 70 |
| 6 | 88 | 79 | 73 | 68 | 86 | 78 | 72 | 68 | 76 | 71 | 68 | 75 | 71 | 67 | 74 | 70 | 67 | 65 |
| 7 | 83 | 74 | 68 | 64 | 82 | 73 | 68 | 63 | 72 | 67 | 63 | 71 | 66 | 63 | 70 | 66 | 62 | 61 |
| 8 | 79 | 70 | 64 | 59 | 78 | 69 | 63 | 59 | 68 | 63 | 59 | 67 | 62 | 59 | 66 | 62 | 59 | 57 |
| 9 | 75 | 66 | 60 | 56 | 74 | 65 | 60 | 56 | 64 | 59 | 55 | 63 | 59 | 55 | 62 | 58 | 55 | 54 |
| 10 | 72 | 62 | 56 | 52 | 71 | 62 | 56 | 52 | 61 | 56 | 52 | 60 | 55 | 52 | 59 | 55 | 52 | 51 |

# Energy Star Qualified:

| | Product # | Fixture Configurations = Energy Star | |
|---|---|---|---|
| ENERGY STAR | 9-LED-(XX)(YY)-CS3<br>9-LED-(XX)(YY)-CL3 | Lumen Package:<br>CCT: | 1100 / 1300 / 2000 / 2800 (XX = 11, 13, 20, 28)<br>2700K / 3000K / 3500K / 4000K (YY = 27, 30, 35, 40) |
| ENERGY STAR | ‘Reverse Phase’ Dimming (-R1)<br>9-LED-(XX)(YY)-CS3-R1<br>9-LED-(XX)(YY)-CL3-R1<br>9-LED-(XX)(YY)-CS3-R1<br>9-LED-(XX)(YY)-CL3-R1 | Lumen Package:<br>CCT: | 1100 / 1300 / 2000 (XX = 11, 13, 20)<br>2700K / 3000K / 3500K / 4000K (YY = 27, 30, 35, 40) |
| ENERGY STAR | ‘Dali’ Dimming (-D1)<br>9-LED-11(YY)-CS3-D1<br>9-LED-11(YY)-CL3-D1<br>9-LED-13(YY)-CS3-D1<br>9-LED-13(YY)-CL3-D1 | CCT: | 2700K / 3000K / 3500K / 4000K (YY = 27, 30, 35, 40) |

Fixtures tested to IES recommended standard for solid state lighting per LM-79-08. Photometric performance on a single unit represents a baseline of performance for the fixture. Results may vary in the field.

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Visit us at www.junolightinggroup.com

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# PERFORMANCE DATA

## 2700K, 3000K, 3500K & 4100K CCT LUMINAIRES SPACED 3′ FROM WALL

**Catalog Number:** 9-LED-28351W-CL3-WS
**Spread:** Single Wall

| Single Unit | | | | | | Lamp | Multiple Units On 2′ Centers* | | | Multiple Units On 3′ Centers* | | | Multiple Units On 4′ Centers* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lateral Distance From Fixture 3′ From Wall | | | | | | DLM-2800 2700K/3000K/3500K/4100K | Spaced 3′ From Wall | | | Spaced 3′ From Wall | | | Spaced 3′ From Wall | | |
| 0′ | 1′ | 2′ | 3′ | 4′ | 5′ | Distance From Ceiling | CL | | CL | CL | | CL | CL | | CL |
| 7 | 6 | 4 | 2 | 2 | 2 | 1′ | 15 | 15 | 15 | 11 | 11 | 11 | 9 | 7 | 9 |
| 15 | 13 | 8 | 5 | 3 | 2 | 2′ | 33 | 33 | 33 | 24 | 23 | 24 | 20 | 16 | 20 |
| 17 | 15 | 10 | 6 | 4 | 3 | 3′ | 41 | 41 | 41 | 30 | 29 | 30 | 23 | 21 | 23 |
| 15 | 14 | 10 | 7 | 4 | 3 | 4′ | 40 | 40 | 40 | 30 | 30 | 30 | 23 | 22 | 23 |
| 13 | 11 | 9 | 6 | 5 | 4 | 5′ | 36 | 36 | 36 | 26 | 26 | 26 | 20 | 20 | 20 |
| 10 | 10 | 8 | 6 | 5 | 4 | 6′ | 32 | 32 | 32 | 23 | 23 | 23 | 18 | 18 | 18 |
| 9 | 8 | 7 | 6 | 4 | 4 | 7′ | 28 | 28 | 28 | 21 | 21 | 21 | 16 | 16 | 16 |
| 7 | 7 | 6 | 5 | 4 | 3 | 8′ | 24 | 25 | 24 | 18 | 18 | 18 | 14 | 13 | 14 |
| 5 | 5 | 5 | 4 | 3 | 3 | 9′ | 20 | 20 | 20 | 15 | 15 | 15 | 12 | 11 | 12 |

LUMEN MULTIPLIER:
2000 X .69
1300 X .45
1100 X .39

***Based on minimum of five luminaires. Reflectances: 80, 50, 20. Values are rounded to nearest whole footcandle.**

## 2700K, 3000K, 3500K & 4100K CCT LUMINAIRES SPACED 4′ FROM WALL

**Catalog Number:** 9-LED-28351W-CL3-WS
**Spread:** Single Wall

| Single Unit | | | | | | Lamp | Multiple Units On 2′ Centers* | | | Multiple Units On 3′ Centers* | | | Multiple Units On 4′ Centers* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lateral Distance From Fixture 4′ From Wall | | | | | | DLM-2800 2700K/3000K/3500K/4100K | Spaced 4′ From Wall | | | Spaced 4′ From Wall | | | Spaced 4′ From Wall | | |
| 0′ | 1′ | 2′ | 3′ | 4′ | 5′ | Distance From Ceiling | CL | | CL | CL | | CL | CL | | CL |
| 4 | 3 | 3 | 2 | 2 | 2 | 1′ | 9 | 9 | 9 | 7 | 7 | 7 | 6 | 5 | 6 |
| 8 | 7 | 5 | 4 | 3 | 2 | 2′ | 21 | 21 | 21 | 16 | 15 | 16 | 13 | 11 | 13 |
| 10 | 9 | 7 | 5 | 4 | 3 | 3′ | 29 | 29 | 29 | 21 | 21 | 21 | 17 | 16 | 17 |
| 11 | 10 | 8 | 6 | 4 | 3 | 4′ | 31 | 32 | 31 | 23 | 23 | 23 | 18 | 18 | 18 |
| 10 | 9 | 8 | 6 | 5 | 4 | 5′ | 31 | 31 | 31 | 23 | 23 | 23 | 18 | 18 | 18 |
| 9 | 8 | 7 | 6 | 5 | 4 | 6′ | 29 | 29 | 29 | 22 | 22 | 22 | 17 | 17 | 17 |
| 8 | 7 | 6 | 5 | 4 | 4 | 7′ | 26 | 27 | 26 | 20 | 20 | 20 | 16 | 15 | 16 |
| 7 | 7 | 6 | 5 | 4 | 4 | 8′ | 24 | 25 | 24 | 18 | 19 | 18 | 15 | 14 | 15 |
| 6 | 5 | 5 | 4 | 4 | 3 | 9′ | 20 | 21 | 20 | 16 | 16 | 16 | 12 | 12 | 12 |

LUMEN MULTIPLIER:
2000 X .69
1300 X .45
1100 X .39

***Based on minimum of five luminaires. Reflectances: 80, 50, 20. Values are rounded to nearest whole footcandle.**

Fixtures tested to IES recommended standard for solid state lighting per LM-79-08. Photometric performance on a single unit represents a baseline of performance for the fixture. Results may vary in the field.

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by Schneider Electric

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# PERFORMANCE DATA

## 2700K, 3000K, 3500K & 4100K CCT LUMINAIRES SPACED 3′ FROM WALL

**Catalog Number:** 9-LED-2035W-CS3-WS
**Spread:** Single Wall

| Single Unit | | | | | | Lamp | Multiple Units On 2′ Centers* | | | Multiple Units On 3′ Centers* | | | Multiple Units On 4′ Centers* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lateral Distance From Fixture 3′ From Wall | | | | | | DLM-2000 2700K/3000K/3500K/4100K | Spaced 3′ From Wall | | | Spaced 3′ From Wall | | | Spaced 3′ From Wall | | |
| 0′ | 1′ | 2′ | 3′ | 4′ | 5′ | Distance From Ceiling | CL | | CL | CL | | CL | CL | | CL |
| 4 | 4 | 2 | 1 | 1 | 1 | 1′ | 9 | 9 | 9 | 7 | 7 | 7 | 6 | 5 | 6 |
| 9 | 8 | 5 | 3 | 2 | 2 | 2′ | 21 | 21 | 21 | 15 | 14 | 15 | 13 | 10 | 13 |
| 11 | 9 | 6 | 4 | 2 | 2 | 3′ | 26 | 26 | 26 | 19 | 18 | 19 | 15 | 13 | 15 |
| 10 | 9 | 6 | 4 | 3 | 2 | 4′ | 25 | 25 | 25 | 18 | 18 | 18 | 14 | 14 | 14 |
| 8 | 7 | 6 | 4 | 3 | 2 | 5′ | 22 | 23 | 22 | 16 | 16 | 16 | 13 | 12 | 13 |
| 7 | 6 | 5 | 4 | 3 | 2 | 6′ | 20 | 20 | 20 | 15 | 15 | 15 | 12 | 11 | 12 |
| 5 | 5 | 4 | 4 | 3 | 2 | 7′ | 18 | 18 | 18 | 13 | 13 | 13 | 10 | 10 | 10 |
| 4 | 4 | 4 | 3 | 2 | 2 | 8′ | 15 | 15 | 15 | 12 | 12 | 12 | 9 | 9 | 9 |
| 3 | 3 | 3 | 3 | 2 | 2 | 9′ | 12 | 12 | 12 | 10 | 10 | 10 | 7 | 7 | 7 |

| LUMEN MULTIPLIER: |
|---|
| 2800 X 1.44 |
| 1300 X 0.64 |
| 1100 X 0.55 |

***Based on minimum of five luminaires. Reflectances: 80, 50, 20. Values are rounded to nearest whole footcandle.**

## 2700K, 3000K, 3500K & 4100K CCT LUMINAIRES SPACED 4′ FROM WALL

**Catalog Number:** 9-LED-2035W-CS3-WS
**Spread:** Single Wall

| Single Unit | | | | | | Lamp | Multiple Units On 2′ Centers* | | | Multiple Units On 3′ Centers* | | | Multiple Units On 4′ Centers* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lateral Distance From Fixture 4′ From Wall | | | | | | DLM-2000 2700K/3000K/3500K/4100K | Spaced 4′ From Wall | | | Spaced 4′ From Wall | | | Spaced 4′ From Wall | | |
| 0′ | 1′ | 2′ | 3′ | 4′ | 5′ | Distance From Ceiling | CL | | CL | CL | | CL | CL | | CL |
| 2 | 2 | 2 | 1 | 1 | 1 | 1′ | 6 | 6 | 6 | 5 | 4 | 5 | 4 | 3 | 4 |
| 5 | 5 | 3 | 2 | 2 | 2 | 2′ | 13 | 13 | 13 | 10 | 10 | 10 | 8 | 7 | 8 |
| 7 | 6 | 5 | 3 | 2 | 2 | 3′ | 18 | 18 | 18 | 13 | 13 | 13 | 10 | 10 | 10 |
| 7 | 6 | 5 | 4 | 3 | 2 | 4′ | 19 | 20 | 19 | 14 | 15 | 14 | 11 | 11 | 11 |
| 6 | 6 | 5 | 4 | 3 | 2 | 5′ | 19 | 20 | 19 | 14 | 14 | 14 | 11 | 11 | 11 |
| 6 | 5 | 5 | 4 | 3 | 2 | 6′ | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 |
| 5 | 5 | 4 | 3 | 3 | 2 | 7′ | 17 | 17 | 17 | 13 | 13 | 13 | 10 | 10 | 10 |
| 4 | 4 | 4 | 3 | 3 | 2 | 8′ | 15 | 15 | 15 | 12 | 12 | 12 | 9 | 9 | 9 |
| 4 | 3 | 3 | 3 | 2 | 2 | 9′ | 13 | 13 | 13 | 10 | 10 | 10 | 8 | 7 | 8 |

| LUMEN MULTIPLIER: |
|---|
| 2800 X 1.44 |
| 1300 X 0.64 |
| 1100 X 0.55 |

***Based on minimum of five luminaires. Reflectances: 80, 50, 20. Values are rounded to nearest whole footcandle.**

Fixtures tested to IES recommended standard for solid state lighting per LM-79-08. Photometric performance on a single unit represents a baseline of performance for the fixture. Results may vary in the field.

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## ENVIRONMENTALLY FRIENDLY, ENERGY EFFICIENT

- Comparable light output to 26W, 32W, 42W and 2x26W CFL while consuming 18, 21, 31 and 46 watts.
- No harmful ultraviolet or infrared wavelengths
- No lead or mercury

# 9" 1100/1300/2000/2800 LUMEN LED DOWNLIGHT CYLINDER

OPEN APERTURE

**9-LED SERIES**

Type Cat. No.

Project:

Notes:

## PRODUCT SPECIFICATIONS

### Optics

**Cone:** Self-flanged, low iridescent satin or specular Alzak® cone standard • Cone available in clear, gold, black, pewter, wheat, and bronze Alzak® finishes; see trim options • Computer-optimized reflector maximizes fixture efficiency • Deep regression of source produces a very low glare system with 40° cut-off to lamp and lamp image • Lensed mixing chamber conceals the LEDs to produce uniform aperture luminance

### Electrical

**LED Light Engine:** Innovative light engine utilizes remote phosphor lens and mixing chamber to ensure perfectly mixed light, resulting in uniform colors and superior color consistency from fixture to fixture • 2700K, 3000K, 3500K and 4100K color temperatures available • CRI>80 • Cast aluminum heat sink integrated directly with housing provides superior thermal management with LEDs operating below manufacturer's published junction temperature to ensure attainment of rated life of the LEDs • Light engine mounts directly to heat sink and is easily replaceable • Light engine/reflector system produces 900 to 2500 lumens while using only 18 to 46 watts of energy and incorporates the latest generation of high lumen LEDs.

**Dimming:** Dimmable via 0-10V protocol, increasing efficiency up to 30% while dimming • For a list of compatible dimmers, see LED-DIM.

**LED Driver:** Universal driver accommodates 120V to 277V input volts AC at 50/60Hz, 2800 lumen unit is voltage specific • Power factor >0.9 • Dimmable via 0-10V protocol, increasing efficiency up to 30% while dimming

**Life:** Rated for 50,000 hours at 70% lumen maintenance

### Mechanical

**Housing:** One piece heavy gauge steel with white or black baked textured powder coat finish.

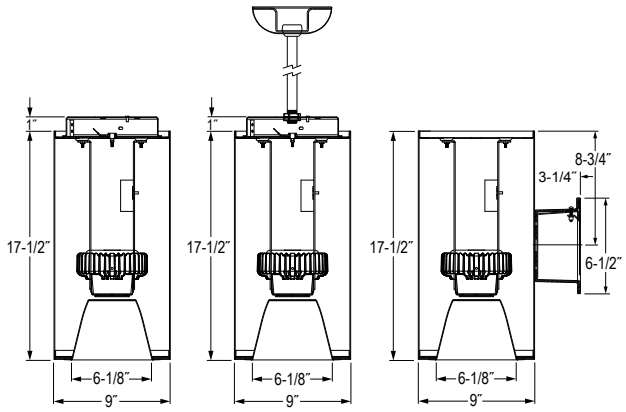
**Mounting:** Available for surface, pendant or wall mounting • Pendant mounting features hang straight pendant mounting kits that allows for mounting on to sloped ceiling with an angle up to 45° • Hinged reveal allows single person installation.

### Labels and Listings

- UL listed for damp locations • I.B.E.W. Union made
- UL and cUL, RoHS complaint • EMI complies with FCC 47, Part 15, Class A
- Energy Star qualified, page 2 for designated products
- ARRA compliant

**Warranty:** 5 years when used in accordance with manufacturing guidelines. Product specifications subject to change without notice.

## DIMENSIONS




### ENGINEERING DATA

| Voltage | 120V - 277V | | | |
|---|---|---|---|---|
| Light Engine Lumens | 1100 | 1300 | 2000 | 2800 |
| CCT | 4K/35K/3K/27K | 4K/35K/3K/27K | 4K/35K/3K/27K | 4K/35K/3K/27K |
| Input Wattage | 18W/18W/19W/19W | 20W/21W/22W/22W | 30W/31W/33W/33W | 46W/46W/49W/49W |
| Input Frequency | 50/60Hz | 50/60Hz | 50/60Hz | 50/60Hz |
| Power Factor | 0.9 | 0.9 | 0.9 | 0.9 |

347 Volt available, consult factory.

## ORDERING INFORMATION: Rough-in, reflector and accessories each ordered separately.

Examples: **9-LED-1327W-CS3 / 9-LED-1135W-CL3-WH / 9-LED-13402B-GS3-PD**

| Cat. # | Lumens | Color Temp. | ♦Voltage | Housing Color | Trim Options | Generation | Options |
|---|---|---|---|---|---|---|---|
| | | | * | | | 3 | |

**9-LED** Surface Mount
**9P-LED** ▪ Pendant Mount
**9B-LED** Wall Mount

| Lumens | Color Temp. | ♦Voltage | Housing Color |
|---|---|---|---|
| 11 1100 | 27 2700K | 1 120V | W White |
| 13 1300 | 30 3000K | 2 277V | B Black |
| 20 2000 | 35 3500K | 3 347V | |
| ♦28 2800 | 40 4100K | | |

**Alzak® Finish Options:**

| | Satin | Specular |
|---|---|---|
| Clear | CS | CL |
| Gold | GS | GL |
| Black | BS | BL |
| Pewter | PTS | PTL |
| Wheat | WTS | WTL |
| Bronze | BZS | BZL |

**Painted Finish Options**

White W

**Options**

- **WH** White Flange
- **WS** Single Wall Wash
- **BP** Emergency Battery Pack w/ Test switch (Battery & test switch remotely mounted)
- **347** 347 Volt (1100/1300/2000 lumen units only)
- †**R1** Reverse Phase Dimming (1100/1300/2000Lm, 120V only) *STD. on 2800 Lumen/120V
- **D1** DALI Conrol Dimming (1100/1300Lm, 120V only)
- **PD** Lutron Dimming Driver (1100, 1300Lm Only)

Example: **P24-W**

**Pendant Kits/Accessories**

- **P18-W** 18″ Hang Straight Mounting Kit, White
- **P18-B** 18″ Hang Straight Mounting Kit, Black
- **P24-W** 24″ Hang Straight Mounting Kit, White
- **P24-B** 24″ Hang Straight Mounting Kit, Black
- **P36-W** 36″ Hang Straight Mounting Kit, White
- **P36-B** 36″ Hang Straight Mounting Kit, Black
- **DM** For (0-10V) standard Dimming Example: **-P24-W-DM**
- **DM-PD** For use with Lutron Dimming Driver option. Example: **-P24-W-DM-PD**
- **DM-D1** For use with Dali Control option Example: **-P24-W-DM-D1**
- **BP-FRTM** For Battery Pack add **'-BP-FRTM'** to Pendant Kit. Example: **-P24-W-BP-FRTM**

♦2800 Lumen unit is voltage specific, all others are universal voltage.

▪See accessories for pendant mounting of fixtures with dimming or emergency battery pack.

†R1 Uses standard stem accessories

Rev. 1 09/13

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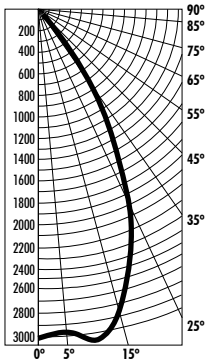
www.junolightinggroup.com

## 2700K, 3000K, 3500K & 4100K CCT

**Catalog Number: 9-LED-28351W-CL3**
PHOTOMETRIC REPORT
**Test Number:** PR10121883
**Total Lumen Output:** 2559 Lumens
**Luminaire Efficacy:** 52.2 lm/w (2700K), 52.2 lm/w (3000K)
55.6 lm/w (3500K), 55.6 lm/w (4100K)
**Luminaire Spacing Criteria:** 0.89
**Luminaire:** Clear specular Alzak® reflector. Open bottom.
**CIE-Type:** Direct




### Candlepower Distribution
(Candelas)

| Angle | Candela | Lumens |
|---|---|---|
| 0° | 3009 | |
| 5° | 2966 | 283 |
| 15° | 2870 | 813 |
| 25° | 2009 | 930 |
| 35° | 809 | 508 |
| 45° | 10 | 8 |
| 55° | 0 | 0 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |

Lumen Multiplier: 2000 x 0.69
1300 x 0.45
1100 x 0.39

### Initial Footcandles

| Distance to Illuminated Plane (Feet) | Footcandles Beam Center | Footcandles Beam Edge | Beam Diameter |
|---|---|---|---|
| 6′ | 83.6 | 29.0 | 6.6′ |
| 7′ | 61.4 | 21.3 | 7.7′ |
| 8′ | 47.0 | 16.3 | 8.8′ |
| 9′ | 37.1 | 12.9 | 9.9′ |
| 10′ | 30.1 | 10.4 | 11.0′ |
| 11′ | 24.9 | 8.6 | 12.1′ |
| 12′ | 20.9 | 7.2 | 13.2′ |
| 13′ | 17.8 | 6.2 | 14.2′ |
| 14′ | 15.4 | 5.3 | 15.3′ |
| 15′ | 13.4 | 4.6 | 16.4′ |

### Luminance Data

| Angle in Degrees | Candela/M² |
|---|---|
| 45° | 783 |
| 55° | 201 |
| 65° | 670 |
| 75° | 787 |
| 85° | 2922 |

### Zonal Lumen Summary

| Zone | Lumens% | %Fixture |
|---|---|---|
| 0-30° | 2026 | 79.2 |
| 0-40° | 2535 | 99.1 |
| 0-60° | 2545 | 99.4 |
| 0-90° | 2559 | 100.0 |
| 90-180° | 0 | 0.0 |
| 0-180° | 2559 | 100.0 |

### AVERAGE INITIAL FOOTCANDLES
Reflectances: 80% Ceiling, 50% Walls, 30% Floors

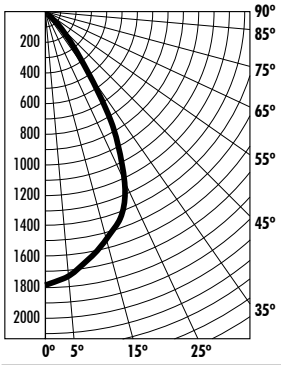
| Luminaire Spacing | Room Cavity Ratio RCR1 | RCR4 | RCR8 |
|---|---|---|---|
| 5′ x 5′ | 114 | 94 | 75 |
| 6′ x 6′ | 79 | 65 | 52 |
| 7′ x 7′ | 58 | 48 | 38 |
| 8′ x 8′ | 44 | 37 | 29 |
| 9′ x 9′ | 35 | 29 | 23 |
| 10′ x 10′ | 28 | 24 | 19 |
| 11′ x 11′ | 23 | 19 | 15 |
| 12′ x 12′ | 20 | 16 | 13 |

### COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)
Effective Floor Reflectance 20%

| PCC | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 114 | 111 | 109 | 107 | 111 | 109 | 107 | 105 | 105 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | 94 |
| 2 | 108 | 104 | 100 | 97 | 106 | 102 | 99 | 96 | 99 | 96 | 94 | 96 | 94 | 92 | 93 | 91 | 90 | 88 |
| 3 | 103 | 97 | 93 | 89 | 101 | 96 | 92 | 88 | 93 | 90 | 87 | 91 | 88 | 95 | 89 | 86 | 84 | 83 |
| 4 | 99 | 91 | 86 | 82 | 97 | 90 | 85 | 82 | 88 | 84 | 81 | 86 | 83 | 80 | 84 | 81 | 79 | 77 |
| 5 | 94 | 86 | 81 | 76 | 92 | 85 | 80 | 76 | 83 | 79 | 75 | 82 | 78 | 75 | 80 | 77 | 74 | 73 |
| 6 | 90 | 81 | 76 | 71 | 88 | 80 | 75 | 71 | 79 | 74 | 71 | 78 | 73 | 70 | 76 | 73 | 70 | 68 |
| 7 | 85 | 77 | 71 | 67 | 84 | 76 | 71 | 67 | 75 | 70 | 66 | 74 | 69 | 66 | 72 | 69 | 66 | 64 |
| 8 | 82 | 73 | 67 | 63 | 80 | 72 | 67 | 63 | 71 | 66 | 63 | 70 | 65 | 62 | 69 | 65 | 62 | 61 |
| 9 | 78 | 69 | 63 | 59 | 77 | 68 | 63 | 59 | 67 | 62 | 59 | 66 | 62 | 59 | 66 | 62 | 59 | 57 |
| 10 | 74 | 65 | 60 | 56 | 73 | 65 | 60 | 56 | 64 | 59 | 56 | 63 | 59 | 56 | 63 | 58 | 55 | 54 |

## 2700K, 3000K, 3500K & 4100K CCT

**Catalog Number: 9-LED-2035W-CS3**
PHOTOMETRIC REPORT
**Test Number:** PR10121891
**Total Lumen Output:** 1603 Lumens
**Luminaire Efficacy:** 48.6 lm/w (2700K), 48.6 lm/w (3000K)
51.5 lm/w (3500K), 53.4 lm/w (4100K)
**Luminaire Spacing Criteria:** 0.94
**Luminaire:** Clear satin Alzak® reflector. Open bottom.
**CIE-Type:** Direct




### Candlepower Distribution
(Candelas)

| Angle | Candela | Lumens |
|---|---|---|
| 0° | 1795 | |
| 5° | 1749 | 167 |
| 15° | 1535 | 435 |
| 25° | 1220 | 565 |
| 35° | 514 | 323 |
| 45° | 111 | 86 |
| 55° | 22 | 20 |
| 65° | 3 | 3 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |

Lumen Multiplier: 2800 x 1.44
1300 x 0.64
1100 x 0.55

### Initial Footcandles

| Distance to Illuminated Plane (Feet) | Footcandles Beam Center | Footcandles Beam Edge | Beam Diameter |
|---|---|---|---|
| 6′ | 49.9 | 16.3 | 6.9′ |
| 7′ | 36.6 | 12.0 | 8.0′ |
| 8′ | 28.0 | 9.2 | 9.2′ |
| 9′ | 22.2 | 7.2 | 10.3′ |
| 10′ | 18.0 | 5.9 | 11.4′ |
| 11′ | 14.8 | 4.9 | 12.6′ |
| 12′ | 12.5 | 4.1 | 13.7′ |
| 13′ | 10.6 | 3.5 | 14.9′ |
| 14′ | 9.2 | 3.0 | 16.0′ |
| 15′ | 8.0 | 2.6 | 17.2′ |

### Luminance Data

| Angle in Degrees | Candela/M² |
|---|---|
| 45° | 8636 |
| 55° | 2100 |
| 65° | 396 |
| 75° | 0 |
| 85° | 2326 |

### Zonal Lumen Summary

| Zone | Lumens% | %Fixture |
|---|---|---|
| 0-30° | 1167 | 72.8 |
| 0-40° | 1490 | 92.9 |
| 0-60° | 1596 | 99.6 |
| 0-90° | 1603 | 100.0 |
| 90-180° | 0 | 0.0 |
| 0-180° | 1603 | 100.0 |

### AVERAGE INITIAL FOOTCANDLES
Reflectances: 80% Ceiling, 50% Walls, 30% Floors

| Luminaire Spacing | Room Cavity Ratio RCR1 | RCR4 | RCR8 |
|---|---|---|---|
| 5′ x 5′ | 71 | 58 | 45 |
| 6′ x 6′ | 49 | 40 | 31 |
| 7′ x 7′ | 36 | 29 | 23 |
| 8′ x 8′ | 28 | 23 | 18 |
| 9′ x 9′ | 22 | 18 | 14 |
| 10′ x 10′ | 18 | 14 | 11 |
| 11′ x 11′ | 15 | 12 | 9 |
| 12′ x 12′ | 12 | 10 | 8 |

### COEFFICIENTS OF UTILIZATION - % (Zonal Cavity Method)
Effective Floor Reflectance 20%

| PCC | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 113 | 111 | 108 | 106 | 111 | 109 | 106 | 104 | 104 | 103 | 101 | 101 | 99 | 98 | 97 | 96 | 95 | 93 |
| 2 | 108 | 103 | 99 | 96 | 106 | 101 | 98 | 94 | 98 | 95 | 92 | 95 | 93 | 90 | 92 | 90 | 89 | 87 |
| 3 | 102 | 96 | 91 | 87 | 100 | 95 | 90 | 86 | 92 | 88 | 85 | 90 | 86 | 84 | 87 | 85 | 82 | 81 |
| 4 | 97 | 90 | 84 | 80 | 95 | 88 | 83 | 79 | 86 | 82 | 78 | 84 | 81 | 78 | 82 | 79 | 77 | 75 |
| 5 | 92 | 84 | 78 | 74 | 91 | 83 | 77 | 73 | 81 | 76 | 73 | 79 | 75 | 72 | 78 | 74 | 71 | 70 |
| 6 | 88 | 79 | 73 | 68 | 86 | 78 | 72 | 68 | 76 | 71 | 68 | 75 | 71 | 67 | 74 | 70 | 67 | 65 |
| 7 | 83 | 74 | 68 | 64 | 82 | 73 | 68 | 63 | 72 | 67 | 63 | 71 | 66 | 63 | 70 | 66 | 62 | 61 |
| 8 | 79 | 70 | 64 | 59 | 78 | 69 | 63 | 59 | 68 | 63 | 59 | 67 | 62 | 59 | 66 | 62 | 59 | 57 |
| 9 | 75 | 66 | 60 | 56 | 74 | 65 | 60 | 56 | 64 | 59 | 55 | 63 | 59 | 55 | 62 | 58 | 55 | 54 |
| 10 | 72 | 62 | 56 | 52 | 71 | 62 | 56 | 52 | 61 | 56 | 52 | 60 | 55 | 52 | 59 | 55 | 52 | 51 |

# Energy Star Qualified:

| | Product # | Fixture Configurations = Energy Star | |
|---|---|---|---|
| ENERGY STAR | 9-LED-(XX)(YY)-CS3<br>9-LED-(XX)(YY)-CL3 | Lumen Package:<br>CCT: | 1100 / 1300 / 2000 / 2800 (XX = 11, 13, 20, 28)<br>2700K / 3000K / 3500K / 4000K (YY = 27, 30, 35, 40) |
| ENERGY STAR | ‘Reverse Phase’ Dimming (-R1)<br>9-LED-(XX)(YY)-CS3-R1<br>9-LED-(XX)(YY)-CL3-R1<br>9-LED-(XX)(YY)-CS3-R1<br>9-LED-(XX)(YY)-CL3-R1 | Lumen Package:<br>CCT: | 1100 / 1300 / 2000 (XX = 11, 13, 20)<br>2700K / 3000K / 3500K / 4000K (YY = 27, 30, 35, 40) |
| ENERGY STAR | ‘Dali’ Dimming (-D1)<br>9-LED-11(YY)-CS3-D1<br>9-LED-11(YY)-CL3-D1<br>9-LED-13(YY)-CS3-D1<br>9-LED-13(YY)-CL3-D1 | CCT: | 2700K / 3000K / 3500K / 4000K (YY = 27, 30, 35, 40) |

Fixtures tested to IES recommended standard for solid state lighting per LM-79-08. Photometric performance on a single unit represents a baseline of performance for the fixture. Results may vary in the field.

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Visit us at www.junolightinggroup.com

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# PERFORMANCE DATA

## 2700K, 3000K, 3500K & 4100K CCT LUMINAIRES SPACED 3′ FROM WALL

**Catalog Number:** 9-LED-28351W-CL3-WS
**Spread:** Single Wall

| Single Unit | | | | | | Lamp | Multiple Units On 2′ Centers* | | | Multiple Units On 3′ Centers* | | | Multiple Units On 4′ Centers* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lateral Distance From Fixture 3′ From Wall | | | | | | DLM-2800 2700K/3000K/3500K/4100K | Spaced 3′ From Wall | | | Spaced 3′ From Wall | | | Spaced 3′ From Wall | | |
| 0′ | 1′ | 2′ | 3′ | 4′ | 5′ | Distance From Ceiling | CL | | CL | CL | | CL | CL | | CL |
| 7 | 6 | 4 | 2 | 2 | 2 | 1′ | 15 | 15 | 15 | 11 | 11 | 11 | 9 | 7 | 9 |
| 15 | 13 | 8 | 5 | 3 | 2 | 2′ | 33 | 33 | 33 | 24 | 23 | 24 | 20 | 16 | 20 |
| 17 | 15 | 10 | 6 | 4 | 3 | 3′ | 41 | 41 | 41 | 30 | 29 | 30 | 23 | 21 | 23 |
| 15 | 14 | 10 | 7 | 4 | 3 | 4′ | 40 | 40 | 40 | 30 | 30 | 30 | 23 | 22 | 23 |
| 13 | 11 | 9 | 6 | 5 | 4 | 5′ | 36 | 36 | 36 | 26 | 26 | 26 | 20 | 20 | 20 |
| 10 | 10 | 8 | 6 | 5 | 4 | 6′ | 32 | 32 | 32 | 23 | 23 | 23 | 18 | 18 | 18 |
| 9 | 8 | 7 | 6 | 4 | 4 | 7′ | 28 | 28 | 28 | 21 | 21 | 21 | 16 | 16 | 16 |
| 7 | 7 | 6 | 5 | 4 | 3 | 8′ | 24 | 25 | 24 | 18 | 18 | 18 | 14 | 13 | 14 |
| 5 | 5 | 5 | 4 | 3 | 3 | 9′ | 20 | 20 | 20 | 15 | 15 | 15 | 12 | 11 | 12 |

LUMEN MULTIPLIER:
2000 X .69
1300 X .45
1100 X .39

***Based on minimum of five luminaires. Reflectances: 80, 50, 20. Values are rounded to nearest whole footcandle.**

## 2700K, 3000K, 3500K & 4100K CCT LUMINAIRES SPACED 4′ FROM WALL

**Catalog Number:** 9-LED-28351W-CL3-WS
**Spread:** Single Wall

| Single Unit | | | | | | Lamp | Multiple Units On 2′ Centers* | | | Multiple Units On 3′ Centers* | | | Multiple Units On 4′ Centers* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lateral Distance From Fixture 4′ From Wall | | | | | | DLM-2800 2700K/3000K/3500K/4100K | Spaced 4′ From Wall | | | Spaced 4′ From Wall | | | Spaced 4′ From Wall | | |
| 0′ | 1′ | 2′ | 3′ | 4′ | 5′ | Distance From Ceiling | CL | | CL | CL | | CL | CL | | CL |
| 4 | 3 | 3 | 2 | 2 | 2 | 1′ | 9 | 9 | 9 | 7 | 7 | 7 | 6 | 5 | 6 |
| 8 | 7 | 5 | 4 | 3 | 2 | 2′ | 21 | 21 | 21 | 16 | 15 | 16 | 13 | 11 | 13 |
| 10 | 9 | 7 | 5 | 4 | 3 | 3′ | 29 | 29 | 29 | 21 | 21 | 21 | 17 | 16 | 17 |
| 11 | 10 | 8 | 6 | 4 | 3 | 4′ | 31 | 32 | 31 | 23 | 23 | 23 | 18 | 18 | 18 |
| 10 | 9 | 8 | 6 | 5 | 4 | 5′ | 31 | 31 | 31 | 23 | 23 | 23 | 18 | 18 | 18 |
| 9 | 8 | 7 | 6 | 5 | 4 | 6′ | 29 | 29 | 29 | 22 | 22 | 22 | 17 | 17 | 17 |
| 8 | 7 | 6 | 5 | 4 | 4 | 7′ | 26 | 27 | 26 | 20 | 20 | 20 | 16 | 15 | 16 |
| 7 | 7 | 6 | 5 | 4 | 4 | 8′ | 24 | 25 | 24 | 18 | 19 | 18 | 15 | 14 | 15 |
| 6 | 5 | 5 | 4 | 4 | 3 | 9′ | 20 | 21 | 20 | 16 | 16 | 16 | 12 | 12 | 12 |

LUMEN MULTIPLIER:
2000 X .69
1300 X .45
1100 X .39

***Based on minimum of five luminaires. Reflectances: 80, 50, 20. Values are rounded to nearest whole footcandle.**

Fixtures tested to IES recommended standard for solid state lighting per LM-79-08. Photometric performance on a single unit represents a baseline of performance for the fixture. Results may vary in the field.

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by Schneider Electric

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# PERFORMANCE DATA

## 2700K, 3000K, 3500K & 4100K CCT LUMINAIRES SPACED 3′ FROM WALL

**Catalog Number:** 9-LED-2035W-CS3-WS
**Spread:** Single Wall

| Single Unit | | | | | | Lamp | Multiple Units On 2′ Centers* | | | Multiple Units On 3′ Centers* | | | Multiple Units On 4′ Centers* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lateral Distance From Fixture 3′ From Wall | | | | | | DLM-2000 2700K/3000K/3500K/4100K | Spaced 3′ From Wall | | | Spaced 3′ From Wall | | | Spaced 3′ From Wall | | |
| 0′ | 1′ | 2′ | 3′ | 4′ | 5′ | Distance From Ceiling | CL | | CL | CL | | CL | CL | | CL |
| 4 | 4 | 2 | 1 | 1 | 1 | 1′ | 9 | 9 | 9 | 7 | 7 | 7 | 6 | 5 | 6 |
| 9 | 8 | 5 | 3 | 2 | 2 | 2′ | 21 | 21 | 21 | 15 | 14 | 15 | 13 | 10 | 13 |
| 11 | 9 | 6 | 4 | 2 | 2 | 3′ | 26 | 26 | 26 | 19 | 18 | 19 | 15 | 13 | 15 |
| 10 | 9 | 6 | 4 | 3 | 2 | 4′ | 25 | 25 | 25 | 18 | 18 | 18 | 14 | 14 | 14 |
| 8 | 7 | 6 | 4 | 3 | 2 | 5′ | 22 | 23 | 22 | 16 | 16 | 16 | 13 | 12 | 13 |
| 7 | 6 | 5 | 4 | 3 | 2 | 6′ | 20 | 20 | 20 | 15 | 15 | 15 | 12 | 11 | 12 |
| 5 | 5 | 4 | 4 | 3 | 2 | 7′ | 18 | 18 | 18 | 13 | 13 | 13 | 10 | 10 | 10 |
| 4 | 4 | 4 | 3 | 2 | 2 | 8′ | 15 | 15 | 15 | 12 | 12 | 12 | 9 | 9 | 9 |
| 3 | 3 | 3 | 3 | 2 | 2 | 9′ | 12 | 12 | 12 | 10 | 10 | 10 | 7 | 7 | 7 |

| LUMEN MULTIPLIER: |
|---|
| 2800 X 1.44 |
| 1300 X 0.64 |
| 1100 X 0.55 |

***Based on minimum of five luminaires. Reflectances: 80, 50, 20. Values are rounded to nearest whole footcandle.**

## 2700K, 3000K, 3500K & 4100K CCT LUMINAIRES SPACED 4′ FROM WALL

**Catalog Number:** 9-LED-2035W-CS3-WS
**Spread:** Single Wall

| Single Unit | | | | | | Lamp | Multiple Units On 2′ Centers* | | | Multiple Units On 3′ Centers* | | | Multiple Units On 4′ Centers* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lateral Distance From Fixture 4′ From Wall | | | | | | DLM-2000 2700K/3000K/3500K/4100K | Spaced 4′ From Wall | | | Spaced 4′ From Wall | | | Spaced 4′ From Wall | | |
| 0′ | 1′ | 2′ | 3′ | 4′ | 5′ | Distance From Ceiling | CL | | CL | CL | | CL | CL | | CL |
| 2 | 2 | 2 | 1 | 1 | 1 | 1′ | 6 | 6 | 6 | 5 | 4 | 5 | 4 | 3 | 4 |
| 5 | 5 | 3 | 2 | 2 | 2 | 2′ | 13 | 13 | 13 | 10 | 10 | 10 | 8 | 7 | 8 |
| 7 | 6 | 5 | 3 | 2 | 2 | 3′ | 18 | 18 | 18 | 13 | 13 | 13 | 10 | 10 | 10 |
| 7 | 6 | 5 | 4 | 3 | 2 | 4′ | 19 | 20 | 19 | 14 | 15 | 14 | 11 | 11 | 11 |
| 6 | 6 | 5 | 4 | 3 | 2 | 5′ | 19 | 20 | 19 | 14 | 14 | 14 | 11 | 11 | 11 |
| 6 | 5 | 5 | 4 | 3 | 2 | 6′ | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 |
| 5 | 5 | 4 | 3 | 3 | 2 | 7′ | 17 | 17 | 17 | 13 | 13 | 13 | 10 | 10 | 10 |
| 4 | 4 | 4 | 3 | 3 | 2 | 8′ | 15 | 15 | 15 | 12 | 12 | 12 | 9 | 9 | 9 |
| 4 | 3 | 3 | 3 | 2 | 2 | 9′ | 13 | 13 | 13 | 10 | 10 | 10 | 8 | 7 | 8 |

| LUMEN MULTIPLIER: |
|---|
| 2800 X 1.44 |
| 1300 X 0.64 |
| 1100 X 0.55 |

***Based on minimum of five luminaires. Reflectances: 80, 50, 20. Values are rounded to nearest whole footcandle.**

Fixtures tested to IES recommended standard for solid state lighting per LM-79-08. Photometric performance on a single unit represents a baseline of performance for the fixture. Results may vary in the field.

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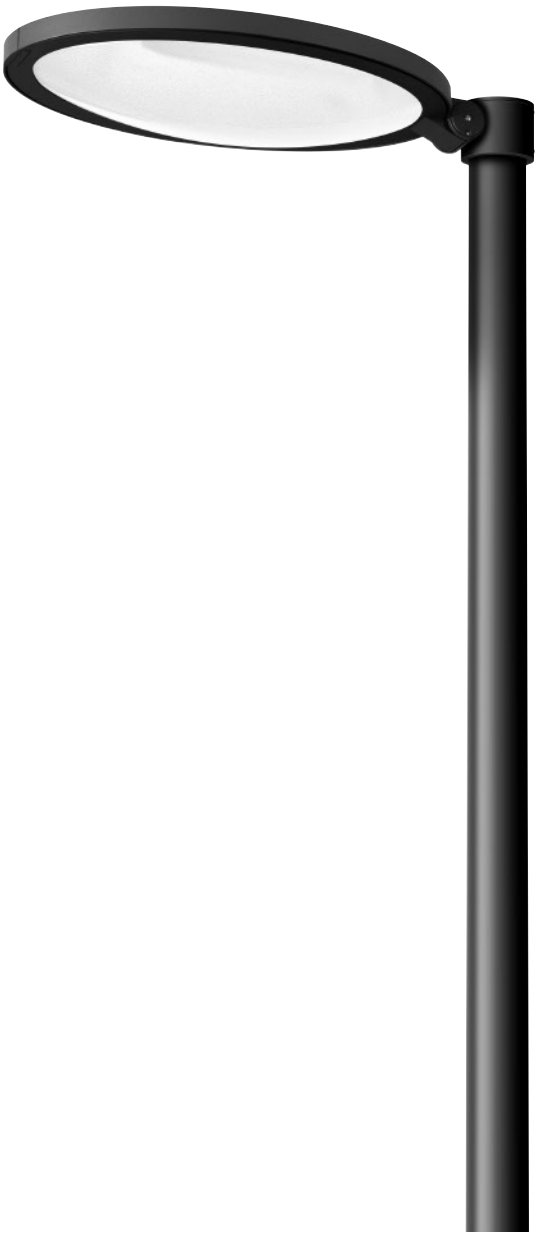
# PM1

Pole top luminaires with asymmetrical wide spread light distribution

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:



**Housing:** Die-cast aluminum housing and slip fitter. Slip fits 3" O.D. pole top, secures to pole with six stainless steel set screws. Die-cast aluminum knuckle allows for 0° or 15° tilt adjustment from horizontal. All aluminum used in the construction is marine grade and copper free.

**Enclosure:** Faceplate is constructed of die-cast aluminum and can be opened without tools for easy maintenance. Clear acrylic diffuser with optical texture. Fully gasketed with a molded silicone gasket.

**Electrical:** 52 W LED luminaire, 58.7 total system watts, -30° C start temperature. Integral 120 V through 277 V electronic LED driver. Standard LED color temperature is 4000K with a >80 CRI. Available in 3000K (>80 CRI); add suffix K3 to order.
**Note:** LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

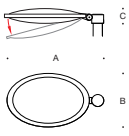
**Finish:** These luminaires are available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

**UL** listed, suitable for wet locations. Protection class: IP66.

**Weight:** 16.5 lbs.

**Effective Projection Area (EPA):** 0.8 $ft^2$

**Luminaire Lumens:** 4898
Tested in accordance with LM-79-08




**Single** pole-top luminaires

| | Lamp | A | B | C |
|---|---|---|---|---|
| **7836LED** | 52 W LED | 29 ½ | 15 ⅜ | 5 ⅜ |

Recommended for use with 14' to 16' poles.

**BEGA-US** 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 www.bega-us.com
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# MINIMAX™ LED O LH T1

*track mounted LED accent light (no cross baffle)*

Spec Sheet

TRACK FIXTURES
11-101

## FEATURES

MiniMax LED O LH is a track mounted accent light powered by one of a number of Xicato LED modules – including Artist Series and Vibrant Series modules – all of which are distinguished by extraordinary color consistency (within 1x2-step MacAdam ellipse). See tables on the reverse for wattages and efficacies.

With a standard track adapter, luminaire may be powered by one of eighteen 20-amp 120-volt track systems. With optional track adapters, luminaire may be powered by one of sixteen 50 or 60-amp 120-volt track systems or one of six 277-volt track systems.

Luminaire, on 120-volt track only, may be dimmed to 10% by an electronic low voltage (ELV) dimmer.

Beam spread is changed by removing the spring-mounted lens holder assembly, replacing one 'twist and lock' reflector with another, and re-inserting the lens holder assembly. Luminaire is ordered with a single reflector; one or both of the other reflectors may be ordered as accessories.

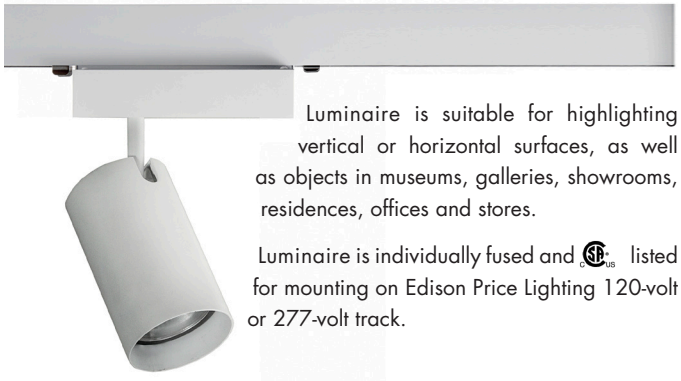
An on-off rocker switch, mounted flush in the circular top of the luminaire, is included standard on luminaires equipped for 120 volt service only.

A concealed swivel provides 385° horizontal rotation and vertical adjustment from 0° to 90°. The swivel is permanently tensioned, allowing the luminaire to remain fixed at any angle. Luminaire can be locked in place by depressing a hinged (`lever lock') bar so that it lies flush with the top of the housing. Lifting the lever lock frees the swivel.

Lens holder assembly accepts one or two of a number of Optical Accessories including spread lenses and color filters. Complimentary Beam Smoother is included. Note that, for enhanced efficiency, cross-baffles are not included. Lens holder assembly is spring-mounted for easy removal and adjustment.

MiniMax luminaires have seamless aluminum housings and cast aluminum tops for lightweight durability and heat dissipation. Standard finish is matte white; also available in black and silver. A white switch is provided with white luminaires and a black switch with black or silver luminaires. For custom color luminaires (CC) specifier must indicate white or black switch.

## APPLICATIONS

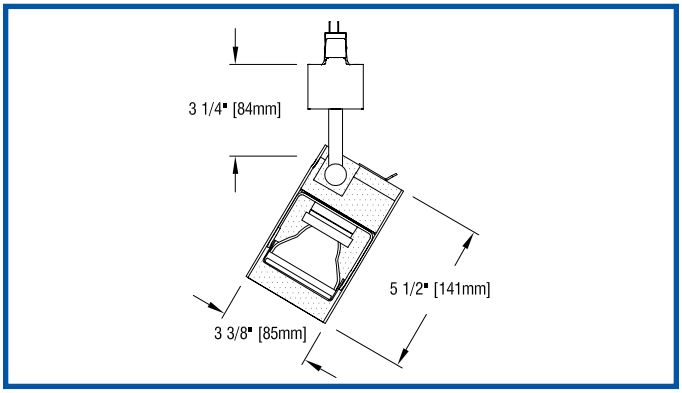


Luminaire is suitable for highlighting vertical or horizontal surfaces, as well as objects in museums, galleries, showrooms, residences, offices and stores.

Luminaire is individually fused and cSAus listed for mounting on Edison Price Lighting 120-volt or 277-volt track.

**Fixture Spacing Requirements** The track adapters of MiniMax LED's are 8" long. For this reason they cannot be mounted closer than 8 ¼ " on center and they cannot be used with any of our three Unicep single-fixture track units.

For the outlet box mounted version of this luminaire, see **MiniMax LED O LH-OBM**.




## PRODUCT CODE

*For complete product code, list basic unit and select one item from each following box.*

Basic Unit ..... MM-XSM2-O-LH

Light Output
- 700 lumens / CRI 97 Artist ..... - L07A
- 1000 lumens / CRI 97 Artist..... - L10A
- 1000 lumens / CRI 80+..... - L10S
- 1500 lumens / CRI 80+ Vibrant ..... *3000K only* ..... - L15V
- 1500 lumens / CRI 80+..... - L15S
- 2100 lumens / CRI 80+..... - L21S

Light Color
- 2700 K ..... *not available on 2100 lumen model* ..... -27K
- 3000 K..... - 30K
- 3500 K ..... - 35K
- 4000 K..... - 40K

Beam Spread Reflector *(specify one to ship with fixture)*
- 20° spot ..... - 20D
- 40° flood ..... - 40D
- 60° wide flood ..... - 60D

## OPTIONS *Specify by adding to the product code.*

**Dimmable**.....standard driver is dimmable to 10% with ELV dimmer on 120-volt track only. Dimming not available on 277-volt track.

**Dimmable to 1%** with Lutron driver controlled by incandescent dimmer on 120-volt service only; not available on 277-volt track .....– LU-DMI

**60-amp adapter** required for fixtures to be used on DoubleLine-50, AutoTrak-50 UpLine-50 or AutoBus-120 track systems (fixture's appearance remains the same) .....– 1C

**277-volt adapter** required for fixtures to be used on HighLine or AutoBus-277 track systems. Note: Fixtures on 277-volt track cannot be dimmed and do not include an on-off switch. ..... – HC

**matte black** housing finish .....– BLK

**Industrial Silver** housing finish ..... – SIL

**custom color** paint housing finish *identify color in specification* ..... – CC

## EXTRA REFLECTORS *Specify as separate line items.*

- **20° spot reflector** ..... XSM-REF20
- **40° flood reflector**..... XSM-REF40
- **60° wide flood reflector** ..... XSM-REF60

## OPTICAL ACCESSORIES ▼ *See next page*

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# MINIMAX LED O LH

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## OPTICAL ACCESSORIES

*Specify as separate line items.*
*All are 2¾" (70mm) dia. Lenses and filters are glass; screens are aluminum.*

**diffuse glass** ..... DGS/2.75
**prismatic lens** (Solite) ..... PLS/2.75
**55° spread lens** ..... LENS/2.75
**40° x 70° spread lens** ..... LENS/2.75-4070
**beam smoother** *included with fixture* ..... CLR/2.75
**color filters**
Daylight Blue ..... DAY/2.75
Surprise Pink ..... PNK/2.75
amber ..... AMB/2.75
blue ..... BLU/2.75
green ..... GRN/2.75
red ..... RED/2.75
**33% light reduction screen** ..... SCR33/2.75
**50% light reduction screen** ..... SCR50/2.75

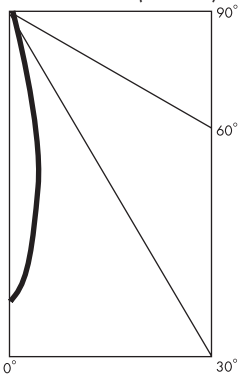
## PHOTOMETRIC REPORT (tested per IESNA LM-79-2008)

*Data prorated from UL Verification Services Report No. 331261. Original test report furnished upon request.*

Luminaire ..... track-mounted LED accent light with a 20° reflector and black lens holder (NO LENS)
Lamp ..... Xicato XSM LED Module, 1500 lumens, 3000K
Lamp Life ..... rated 50.000 hours based on L70/B50 criteria. LM80 report by LED manufacturer furnished upon request
Luminaire Light Output ..... 1146 lumens

### CANDLEPOWER DISTRIBUTION *(Candela)*

| *Vertical Angle* | *Horizontal Angle* 0 |
|---|---|
| 0 | 4975 |
| 5 | 4278 |
| 15 | 1576 |
| 25 | 567 |
| 35 | 13 |
| 45 | 0 |
| 55 | 0 |
| 65 | 0 |
| 75 | 0 |
| 85 | 0 |
| 90 | 0 |




### LUMINANCE DATA

| *Vertical Angle* | *Candela/m²* |
|---|---|
| 45 | 3076 |
| 55 | 1759 |
| 65 | 1014 |
| 75 | 0 |
| 85 | 0 |

### DRIVER INFORMATION

*(UL Class 2, dry and damp location)*
*Dimmable to 10% with trailing edge (ELV) dimmers*

| *Voltage* | *120* | *277* |
|---|---|---|
| Input Watts (700A/1000A/1000/1500/2100 lumens) | 16/21/15/23/26 | 16/21/15/23/26 |
| Input Current (A) (700A/1000A/1000/1500/2100 lumens) | .13/.18/.13/.19/.22 | .06/.08/.05/.08/.09 |
| Output Current (mA) | 500-1050 | 500-1050 |
| Min. Power Factor | 0.99 | 0.99 |
| Operating Temperature Range (F) | –13 to 122 | –13 to 122 |

### LUMINAIRE LIGHT OUTPUT AND EFFICACY

| *LED Module Type* | *Luminaire Light Output* | *Luminaire Efficacy (lms/watt)* | *System Wattage* |
|---|---|---|---|
| 700 Lumens Artist | 516* | 32 | 16* |
| 1000 Lumens Artist | 653* | 31 | 21* |
| 1000 Lumens standard | 721* | 48 | 15 |
| 1500 Lumens standard & Vibrant | 1146* | 50 | 23* |
| 2100 Lumens standard | 1455* | 56 | 26 |

**estimated values*

### LIGHT OUTPUT MULTIPLIER

| *700 lumens Artist* | *1000 lumens Artist* | *1000 lumens* | *1500 lumens standard & Vibrant* | *2100 lumens* |
|---|---|---|---|---|
| .45 *(estimated)* | .57 *(estimated)* | .63 *(estimated)* | 1 | 1.27 *(estimated)* |

# MINIMAX™ LED O LH T2

*track mounted LED accent light (no cross baffle)*

Spec Sheet

TRACK FIXTURES
11-101

## FEATURES

MiniMax LED O LH is a track mounted accent light powered by one of a number of Xicato LED modules – including Artist Series and Vibrant Series modules – all of which are distinguished by extraordinary color consistency (within 1x2-step MacAdam ellipse). See tables on the reverse for wattages and efficacies.

With a standard track adapter, luminaire may be powered by one of eighteen 20-amp 120-volt track systems. With optional track adapters, luminaire may be powered by one of sixteen 50 or 60-amp 120-volt track systems or one of six 277-volt track systems.

Luminaire, on 120-volt track only, may be dimmed to 10% by an electronic low voltage (ELV) dimmer.

Beam spread is changed by removing the spring-mounted lens holder assembly, replacing one 'twist and lock' reflector with another, and re-inserting the lens holder assembly. Luminaire is ordered with a single reflector; one or both of the other reflectors may be ordered as accessories.

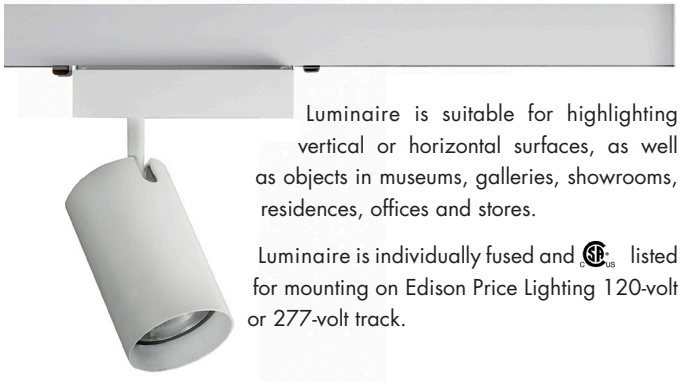
An on-off rocker switch, mounted flush in the circular top of the luminaire, is included standard on luminaires equipped for 120 volt service only.

A concealed swivel provides 385° horizontal rotation and vertical adjustment from 0° to 90°. The swivel is permanently tensioned, allowing the luminaire to remain fixed at any angle. Luminaire can be locked in place by depressing a hinged (`lever lock') bar so that it lies flush with the top of the housing. Lifting the lever lock frees the swivel.

Lens holder assembly accepts one or two of a number of Optical Accessories including spread lenses and color filters. Complimentary Beam Smoother is included. Note that, for enhanced efficiency, cross-baffles are not included. Lens holder assembly is spring-mounted for easy removal and adjustment.

MiniMax luminaires have seamless aluminum housings and cast aluminum tops for lightweight durability and heat dissipation. Standard finish is matte white; also available in black and silver. A white switch is provided with white luminaires and a black switch with black or silver luminaires. For custom color luminaires (CC) specifier must indicate white or black switch.

## APPLICATIONS

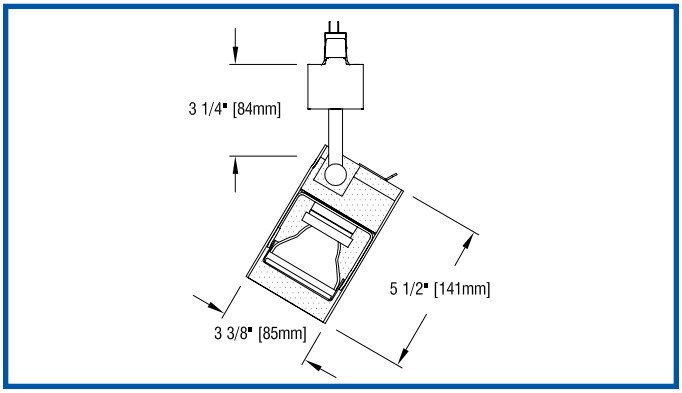


Luminaire is suitable for highlighting vertical or horizontal surfaces, as well as objects in museums, galleries, showrooms, residences, offices and stores.

Luminaire is individually fused and cSAus listed for mounting on Edison Price Lighting 120-volt or 277-volt track.

**Fixture Spacing Requirements** The track adapters of MiniMax LED's are 8" long. For this reason they cannot be mounted closer than 8 ¼ " on center and they cannot be used with any of our three Unicep single-fixture track units.

For the outlet box mounted version of this luminaire, see **MiniMax LED O LH-OBM**.




## PRODUCT CODE

*For complete product code, list basic unit and select one item from each following box.*

Basic Unit ..... MM-XSM2-O-LH

Light Output
- 700 lumens / CRI 97 Artist ..... - L07A
- 1000 lumens / CRI 97 Artist..... - L10A
- 1000 lumens / CRI 80+..... - L10S
- 1500 lumens / CRI 80+ Vibrant ..... *3000K only* ..... - L15V
- 1500 lumens / CRI 80+..... - L15S
- 2100 lumens / CRI 80+..... - L21S

Light Color
- 2700 K ..... *not available on 2100 lumen model* ..... -27K
- 3000 K..... - 30K
- 3500 K ..... - 35K
- 4000 K..... - 40K

Beam Spread Reflector *(specify one to ship with fixture)*
- 20° spot ..... - 20D
- 40° flood ..... - 40D
- 60° wide flood ..... - 60D

## OPTIONS *Specify by adding to the product code.*

**Dimmable**.....standard driver is dimmable to 10% with ELV dimmer on 120-volt track only. Dimming not available on 277-volt track.

**Dimmable to 1%** with Lutron driver controlled by incandescent dimmer on 120-volt service only; not available on 277-volt track .....– LU-DMI

**60-amp adapter** required for fixtures to be used on DoubleLine-50, AutoTrak-50 UpLine-50 or AutoBus-120 track systems (fixture's appearance remains the same) .....– 1C

**277-volt adapter** required for fixtures to be used on HighLine or AutoBus-277 track systems. Note: Fixtures on 277-volt track cannot be dimmed and do not include an on-off switch. ..... – HC

**matte black** housing finish .....– BLK

**Industrial Silver** housing finish ..... – SIL

**custom color** paint housing finish *identify color in specification* ..... – CC

## EXTRA REFLECTORS *Specify as separate line items.*

- **20° spot reflector** ..... XSM-REF20
- **40° flood reflector**..... XSM-REF40
- **60° wide flood reflector** ..... XSM-REF60

## OPTICAL ACCESSORIES ▼ *See next page*

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# MINIMAX LED O LH

EDISON PRICE LIGHTING

## OPTICAL ACCESSORIES

*Specify as separate line items.*
*All are 2¾" (70mm) dia. Lenses and filters are glass; screens are aluminum.*

**diffuse glass** ..... DGS/2.75
**prismatic lens** (Solite) ..... PLS/2.75
**55° spread lens** ..... LENS/2.75
**40° x 70° spread lens** ..... LENS/2.75-4070
**beam smoother** *included with fixture* ..... CLR/2.75
**color filters**
Daylight Blue ..... DAY/2.75
Surprise Pink ..... PNK/2.75
amber ..... AMB/2.75
blue ..... BLU/2.75
green ..... GRN/2.75
red ..... RED/2.75
**33% light reduction screen** ..... SCR33/2.75
**50% light reduction screen** ..... SCR50/2.75

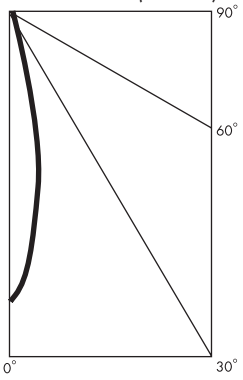
## PHOTOMETRIC REPORT (tested per IESNA LM-79-2008)

*Data prorated from UL Verification Services Report No. 331261. Original test report furnished upon request.*

Luminaire ..... track-mounted LED accent light with a 20° reflector and black lens holder (NO LENS)
Lamp ..... Xicato XSM LED Module, 1500 lumens, 3000K
Lamp Life ..... rated 50.000 hours based on L70/B50 criteria. LM80 report by LED manufacturer furnished upon request
Luminaire Light Output ..... 1146 lumens

### CANDLEPOWER DISTRIBUTION *(Candela)*

| *Vertical Angle* | *Horizontal Angle* 0 |
|---|---|
| 0 | 4975 |
| 5 | 4278 |
| 15 | 1576 |
| 25 | 567 |
| 35 | 13 |
| 45 | 0 |
| 55 | 0 |
| 65 | 0 |
| 75 | 0 |
| 85 | 0 |
| 90 | 0 |




### LUMINANCE DATA

| *Vertical Angle* | *Candela/m²* |
|---|---|
| 45 | 3076 |
| 55 | 1759 |
| 65 | 1014 |
| 75 | 0 |
| 85 | 0 |

### DRIVER INFORMATION

*(UL Class 2, dry and damp location)*
*Dimmable to 10% with trailing edge (ELV) dimmers*

| *Voltage* | *120* | *277* |
|---|---|---|
| Input Watts (700A/1000A/1000/1500/2100 lumens) | 16/21/15/23/26 | 16/21/15/23/26 |
| Input Current (A) (700A/1000A/1000/1500/2100 lumens) | .13/.18/.13/.19/.22 | .06/.08/.05/.08/.09 |
| Output Current (mA) | 500-1050 | 500-1050 |
| Min. Power Factor | 0.99 | 0.99 |
| Operating Temperature Range (F) | –13 to 122 | –13 to 122 |

### LUMINAIRE LIGHT OUTPUT AND EFFICACY

| *LED Module Type* | *Luminaire Light Output* | *Luminaire Efficacy (lms/watt)* | *System Wattage* |
|---|---|---|---|
| 700 Lumens Artist | 516* | 32 | 16* |
| 1000 Lumens Artist | 653* | 31 | 21* |
| 1000 Lumens standard | 721* | 48 | 15 |
| 1500 Lumens standard & Vibrant | 1146* | 50 | 23* |
| 2100 Lumens standard | 1455* | 56 | 26 |

**estimated values*

### LIGHT OUTPUT MULTIPLIER

| *700 lumens Artist* | *1000 lumens Artist* | *1000 lumens* | *1500 lumens standard & Vibrant* | *2100 lumens* |
|---|---|---|---|---|
| .45 *(estimated)* | .57 *(estimated)* | .63 *(estimated)* | 1 | 1.27 *(estimated)* |

# MINIMAX™ LED O LH T3

*track mounted LED accent light (no cross baffle)*

Spec Sheet

TRACK FIXTURES 11-101

## FEATURES

MiniMax LED O LH is a track mounted accent light powered by one of a number of Xicato LED modules – including Artist Series and Vibrant Series modules – all of which are distinguished by extraordinary color consistency (within 1x2-step MacAdam ellipse). See tables on the reverse for wattages and efficacies.

With a standard track adapter, luminaire may be powered by one of eighteen 20-amp 120-volt track systems. With optional track adapters, luminaire may be powered by one of sixteen 50 or 60-amp 120-volt track systems or one of six 277-volt track systems.

Luminaire, on 120-volt track only, may be dimmed to 10% by an electronic low voltage (ELV) dimmer.

Beam spread is changed by removing the spring-mounted lens holder assembly, replacing one 'twist and lock' reflector with another, and re-inserting the lens holder assembly. Luminaire is ordered with a single reflector; one or both of the other reflectors may be ordered as accessories.

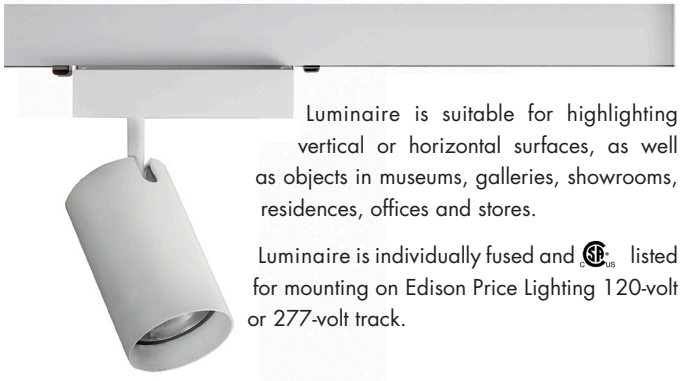
An on-off rocker switch, mounted flush in the circular top of the luminaire, is included standard on luminaires equipped for 120 volt service only.

A concealed swivel provides 385° horizontal rotation and vertical adjustment from 0° to 90°. The swivel is permanently tensioned, allowing the luminaire to remain fixed at any angle. Luminaire can be locked in place by depressing a hinged (`lever lock') bar so that it lies flush with the top of the housing. Lifting the lever lock frees the swivel.

Lens holder assembly accepts one or two of a number of Optical Accessories including spread lenses and color filters. Complimentary Beam Smoother is included. Note that, for enhanced efficiency, cross-baffles are not included. Lens holder assembly is spring-mounted for easy removal and adjustment.

MiniMax luminaires have seamless aluminum housings and cast aluminum tops for lightweight durability and heat dissipation. Standard finish is matte white; also available in black and silver. A white switch is provided with white luminaires and a black switch with black or silver luminaires. For custom color luminaires (CC) specifier must indicate white or black switch.

## APPLICATIONS

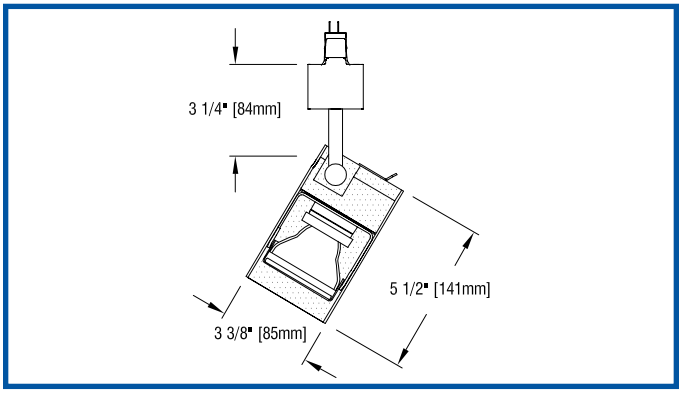


Luminaire is suitable for highlighting vertical or horizontal surfaces, as well as objects in museums, galleries, showrooms, residences, offices and stores.

Luminaire is individually fused and cSAus listed for mounting on Edison Price Lighting 120-volt or 277-volt track.

**Fixture Spacing Requirements** The track adapters of MiniMax LED's are 8" long. For this reason they cannot be mounted closer than 8 ¼ " on center and they cannot be used with any of our three Unicep single-fixture track units.

For the outlet box mounted version of this luminaire, see **MiniMax LED O LH-OBM**.




## PRODUCT CODE

*For complete product code, list basic unit and select one item from each following box.*

Basic Unit ..... MM-XSM2-O-LH

Light Output

| | |
|---|---|
| 700 lumens / CRI 97 Artist | - L07A |
| 1000 lumens / CRI 97 Artist | - L10A |
| 1000 lumens / CRI 80+ | - L10S |
| 1500 lumens / CRI 80+ Vibrant *3000K only* | - L15V |
| 1500 lumens / CRI 80+ | - L15S |
| 2100 lumens / CRI 80+ | - L21S |

Light Color

| | |
|---|---|
| 2700 K *not available on 2100 lumen model* | -27K |
| 3000 K | - 30K |
| 3500 K | - 35K |
| 4000 K | - 40K |

Beam Spread Reflector *(specify one to ship with fixture)*

| | |
|---|---|
| 20° spot | - 20D |
| 40° flood | - 40D |
| 60° wide flood | - 60D |

## OPTIONS *Specify by adding to the product code.*

**Dimmable** ..... standard driver is dimmable to 10% with ELV dimmer on 120-volt track only. Dimming not available on 277-volt track.

**Dimmable to 1%** with Lutron driver controlled by incandescent dimmer on 120-volt service only; not available on 277-volt track ..... – LU-DMI

**60-amp adapter** required for fixtures to be used on DoubleLine-50, AutoTrak-50 UpLine-50 or AutoBus-120 track systems (fixture's appearance remains the same) ..... – 1C

**277-volt adapter** required for fixtures to be used on HighLine or AutoBus-277 track systems. Note: Fixtures on 277-volt track cannot be dimmed and do not include an on-off switch. ..... – HC

**matte black** housing finish ..... – BLK

**Industrial Silver** housing finish ..... – SIL

**custom color** paint housing finish *identify color in specification* ..... – CC

## EXTRA REFLECTORS *Specify as separate line items.*

| | |
|---|---|
| **20° spot reflector** | XSM-REF20 |
| **40° flood reflector** | XSM-REF40 |
| **60° wide flood reflector** | XSM-REF60 |

## OPTICAL ACCESSORIES ▼ *See next page*

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# MINIMAX LED O LH

EDISON PRICE LIGHTING

## OPTICAL ACCESSORIES

*Specify as separate line items.*
*All are 2¾" (70mm) dia. Lenses and filters are glass; screens are aluminum.*

**diffuse glass** ..... DGS/2.75
**prismatic lens** (Solite) ..... PLS/2.75
**55° spread lens** ..... LENS/2.75
**40° x 70° spread lens** ..... LENS/2.75-4070
**beam smoother** *included with fixture* ..... CLR/2.75
**color filters**
Daylight Blue ..... DAY/2.75
Surprise Pink ..... PNK/2.75
amber ..... AMB/2.75
blue ..... BLU/2.75
green ..... GRN/2.75
red ..... RED/2.75
**33% light reduction screen** ..... SCR33/2.75
**50% light reduction screen** ..... SCR50/2.75

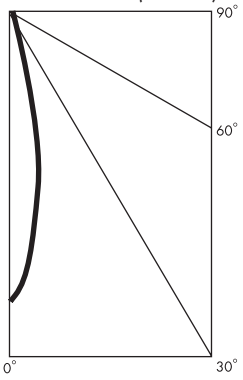
## PHOTOMETRIC REPORT (tested per IESNA LM-79-2008)

*Data prorated from UL Verification Services Report No. 331261. Original test report furnished upon request.*

Luminaire ..... track-mounted LED accent light with a 20° reflector and black lens holder (NO LENS)
Lamp ..... Xicato XSM LED Module, 1500 lumens, 3000K
Lamp Life ..... rated 50.000 hours based on L70/B50 criteria. LM80 report by LED manufacturer furnished upon request
Luminaire Light Output ..... 1146 lumens

### CANDLEPOWER DISTRIBUTION *(Candela)*

| *Vertical Angle* | *Horizontal Angle* 0 |
|---|---|
| 0 | 4975 |
| 5 | 4278 |
| 15 | 1576 |
| 25 | 567 |
| 35 | 13 |
| 45 | 0 |
| 55 | 0 |
| 65 | 0 |
| 75 | 0 |
| 85 | 0 |
| 90 | 0 |




### LUMINANCE DATA

| *Vertical Angle* | *Candela/m²* |
|---|---|
| 45 | 3076 |
| 55 | 1759 |
| 65 | 1014 |
| 75 | 0 |
| 85 | 0 |

### DRIVER INFORMATION

*(UL Class 2, dry and damp location)*
*Dimmable to 10% with trailing edge (ELV) dimmers*

| *Voltage* | *120* | *277* |
|---|---|---|
| Input Watts (700A/1000A/1000/1500/2100 lumens) | 16/21/15/23/26 | 16/21/15/23/26 |
| Input Current (A) (700A/1000A/1000/1500/2100 lumens) | .13/.18/.13/.19/.22 | .06/.08/.05/.08/.09 |
| Output Current (mA) | 500-1050 | 500-1050 |
| Min. Power Factor | 0.99 | 0.99 |
| Operating Temperature Range (F) | –13 to 122 | –13 to 122 |

### LUMINAIRE LIGHT OUTPUT AND EFFICACY

| *LED Module Type* | *Luminaire Light Output* | *Luminaire Efficacy (lms/watt)* | *System Wattage* |
|---|---|---|---|
| 700 Lumens Artist | 516* | 32 | 16* |
| 1000 Lumens Artist | 653* | 31 | 21* |
| 1000 Lumens standard | 721* | 48 | 15 |
| 1500 Lumens standard & Vibrant | 1146* | 50 | 23* |
| 2100 Lumens standard | 1455* | 56 | 26 |

**estimated values*

### LIGHT OUTPUT MULTIPLIER

| *700 lumens Artist* | *1000 lumens Artist* | *1000 lumens* | *1500 lumens standard & Vibrant* | *2100 lumens* |
|---|---|---|---|---|
| .45 *(estimated)* | .57 *(estimated)* | .63 *(estimated)* | 1 | 1.27 *(estimated)* |

# MINIMAX™ LED O LH T4

*track mounted LED accent light (no cross baffle)*

Spec Sheet

TRACK FIXTURES 11-101

## FEATURES

MiniMax LED O LH is a track mounted accent light powered by one of a number of Xicato LED modules – including Artist Series and Vibrant Series modules – all of which are distinguished by extraordinary color consistency (within 1x2-step MacAdam ellipse). See tables on the reverse for wattages and efficacies.

With a standard track adapter, luminaire may be powered by one of eighteen 20-amp 120-volt track systems. With optional track adapters, luminaire may be powered by one of sixteen 50 or 60-amp 120-volt track systems or one of six 277-volt track systems.

Luminaire, on 120-volt track only, may be dimmed to 10% by an electronic low voltage (ELV) dimmer.

Beam spread is changed by removing the spring-mounted lens holder assembly, replacing one 'twist and lock' reflector with another, and re-inserting the lens holder assembly. Luminaire is ordered with a single reflector; one or both of the other reflectors may be ordered as accessories.

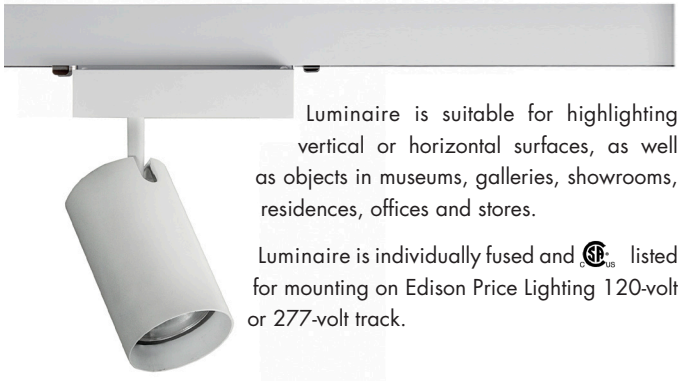
An on-off rocker switch, mounted flush in the circular top of the luminaire, is included standard on luminaires equipped for 120 volt service only.

A concealed swivel provides 385° horizontal rotation and vertical adjustment from 0° to 90°. The swivel is permanently tensioned, allowing the luminaire to remain fixed at any angle. Luminaire can be locked in place by depressing a hinged (`lever lock') bar so that it lies flush with the top of the housing. Lifting the lever lock frees the swivel.

Lens holder assembly accepts one or two of a number of Optical Accessories including spread lenses and color filters. Complimentary Beam Smoother is included. Note that, for enhanced efficiency, cross-baffles are not included. Lens holder assembly is spring-mounted for easy removal and adjustment.

MiniMax luminaires have seamless aluminum housings and cast aluminum tops for lightweight durability and heat dissipation. Standard finish is matte white; also available in black and silver. A white switch is provided with white luminaires and a black switch with black or silver luminaires. For custom color luminaires (CC) specifier must indicate white or black switch.

## APPLICATIONS

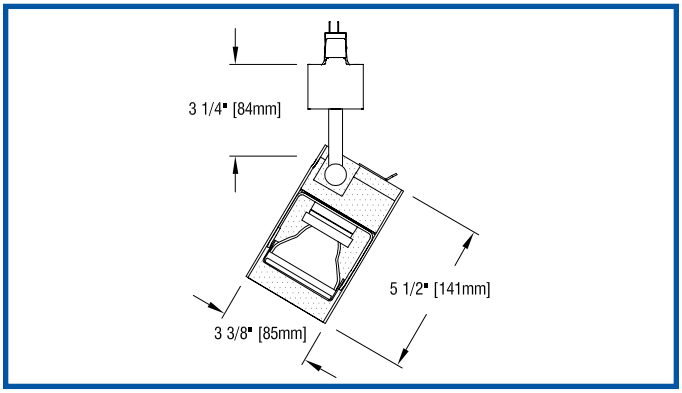


Luminaire is suitable for highlighting vertical or horizontal surfaces, as well as objects in museums, galleries, showrooms, residences, offices and stores.

Luminaire is individually fused and cSAus listed for mounting on Edison Price Lighting 120-volt or 277-volt track.

**Fixture Spacing Requirements** The track adapters of MiniMax LED's are 8" long. For this reason they cannot be mounted closer than 8 ¼ " on center and they cannot be used with any of our three Unicep single-fixture track units.

For the outlet box mounted version of this luminaire, see **MiniMax LED O LH-OBM**.




## PRODUCT CODE

*For complete product code, list basic unit and select one item from each following box.*

Basic Unit ..... MM-XSM2-O-LH

Light Output

| | |
|---|---|
| 700 lumens / CRI 97 Artist | - L07A |
| 1000 lumens / CRI 97 Artist | - L10A |
| 1000 lumens / CRI 80+ | - L10S |
| 1500 lumens / CRI 80+ Vibrant *3000K only* | - L15V |
| 1500 lumens / CRI 80+ | - L15S |
| 2100 lumens / CRI 80+ | - L21S |

Light Color

| | |
|---|---|
| 2700 K *not available on 2100 lumen model* | -27K |
| 3000 K | - 30K |
| 3500 K | - 35K |
| 4000 K | - 40K |

Beam Spread Reflector *(specify one to ship with fixture)*

| | |
|---|---|
| 20° spot | - 20D |
| 40° flood | - 40D |
| 60° wide flood | - 60D |

## OPTIONS *Specify by adding to the product code.*

**Dimmable** ..... standard driver is dimmable to 10% with ELV dimmer on 120-volt track only. Dimming not available on 277-volt track.

**Dimmable to 1%** with Lutron driver controlled by incandescent dimmer on 120-volt service only; not available on 277-volt track ..... – LU-DMI

**60-amp adapter** required for fixtures to be used on DoubleLine-50, AutoTrak-50 UpLine-50 or AutoBus-120 track systems (fixture's appearance remains the same) ..... – 1C

**277-volt adapter** required for fixtures to be used on HighLine or AutoBus-277 track systems. Note: Fixtures on 277-volt track cannot be dimmed and do not include an on-off switch. ..... – HC

**matte black** housing finish ..... – BLK

**Industrial Silver** housing finish ..... – SIL

**custom color** paint housing finish *identify color in specification* ..... – CC

## EXTRA REFLECTORS *Specify as separate line items.*

| | |
|---|---|
| **20° spot reflector** | XSM-REF20 |
| **40° flood reflector** | XSM-REF40 |
| **60° wide flood reflector** | XSM-REF60 |

## OPTICAL ACCESSORIES ▼ *See next page*

EDISON PRICE LIGHTING

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# MINIMAX LED O LH

EDISON PRICE LIGHTING

## OPTICAL ACCESSORIES

*Specify as separate line items.*
*All are 2¾" (70mm) dia. Lenses and filters are glass; screens are aluminum.*

**diffuse glass** ..... DGS/2.75
**prismatic lens** (Solite) ..... PLS/2.75
**55° spread lens** ..... LENS/2.75
**40° x 70° spread lens** ..... LENS/2.75-4070
**beam smoother** *included with fixture* ..... CLR/2.75
**color filters**
Daylight Blue ..... DAY/2.75
Surprise Pink ..... PNK/2.75
amber ..... AMB/2.75
blue ..... BLU/2.75
green ..... GRN/2.75
red ..... RED/2.75
**33% light reduction screen** ..... SCR33/2.75
**50% light reduction screen** ..... SCR50/2.75

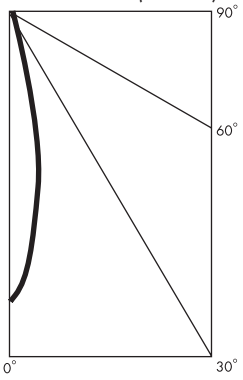
## PHOTOMETRIC REPORT (tested per IESNA LM-79-2008)

*Data prorated from UL Verification Services Report No. 331261. Original test report furnished upon request.*

Luminaire ..... track-mounted LED accent light with a 20° reflector and black lens holder (NO LENS)
Lamp ..... Xicato XSM LED Module, 1500 lumens, 3000K
Lamp Life ..... rated 50.000 hours based on L70/B50 criteria. LM80 report by LED manufacturer furnished upon request
Luminaire Light Output ..... 1146 lumens

### CANDLEPOWER DISTRIBUTION *(Candela)*

| *Vertical Angle* | *Horizontal Angle* 0 |
|---|---|
| 0 | 4975 |
| 5 | 4278 |
| 15 | 1576 |
| 25 | 567 |
| 35 | 13 |
| 45 | 0 |
| 55 | 0 |
| 65 | 0 |
| 75 | 0 |
| 85 | 0 |
| 90 | 0 |




### LUMINANCE DATA

| *Vertical Angle* | *Candela/m²* |
|---|---|
| 45 | 3076 |
| 55 | 1759 |
| 65 | 1014 |
| 75 | 0 |
| 85 | 0 |

### DRIVER INFORMATION

*(UL Class 2, dry and damp location)*
*Dimmable to 10% with trailing edge (ELV) dimmers*

| *Voltage* | *120* | *277* |
|---|---|---|
| Input Watts (700A/1000A/1000/1500/2100 lumens) | 16/21/15/23/26 | 16/21/15/23/26 |
| Input Current (A) (700A/1000A/1000/1500/2100 lumens) | .13/.18/.13/.19/.22 | .06/.08/.05/.08/.09 |
| Output Current (mA) | 500-1050 | 500-1050 |
| Min. Power Factor | 0.99 | 0.99 |
| Operating Temperature Range (F) | –13 to 122 | –13 to 122 |

### LUMINAIRE LIGHT OUTPUT AND EFFICACY

| *LED Module Type* | *Luminaire Light Output* | *Luminaire Efficacy (lms/watt)* | *System Wattage* |
|---|---|---|---|
| 700 Lumens Artist | 516* | 32 | 16* |
| 1000 Lumens Artist | 653* | 31 | 21* |
| 1000 Lumens standard | 721* | 48 | 15 |
| 1500 Lumens standard & Vibrant | 1146* | 50 | 23* |
| 2100 Lumens standard | 1455* | 56 | 26 |

**estimated values*

### LIGHT OUTPUT MULTIPLIER

| *700 lumens Artist* | *1000 lumens Artist* | *1000 lumens* | *1500 lumens standard & Vibrant* | *2100 lumens* |
|---|---|---|---|---|
| .45 *(estimated)* | .57 *(estimated)* | .63 *(estimated)* | 1 | 1.27 *(estimated)* |

# MINIMAX™ LED O LH T5

*track mounted LED accent light (no cross baffle)*

Spec Sheet

TRACK FIXTURES
11-101

## FEATURES

MiniMax LED O LH is a track mounted accent light powered by one of a number of Xicato LED modules – including Artist Series and Vibrant Series modules – all of which are distinguished by extraordinary color consistency (within 1x2-step MacAdam ellipse). See tables on the reverse for wattages and efficacies.

With a standard track adapter, luminaire may be powered by one of eighteen 20-amp 120-volt track systems. With optional track adapters, luminaire may be powered by one of sixteen 50 or 60-amp 120-volt track systems or one of six 277-volt track systems.

Luminaire, on 120-volt track only, may be dimmed to 10% by an electronic low voltage (ELV) dimmer.

Beam spread is changed by removing the spring-mounted lens holder assembly, replacing one 'twist and lock' reflector with another, and re-inserting the lens holder assembly. Luminaire is ordered with a single reflector; one or both of the other reflectors may be ordered as accessories.

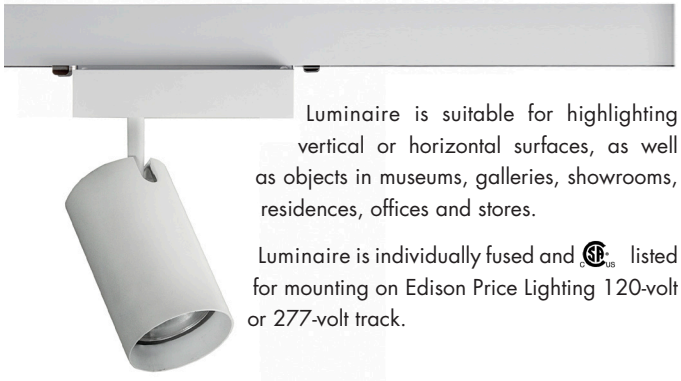
An on-off rocker switch, mounted flush in the circular top of the luminaire, is included standard on luminaires equipped for 120 volt service only.

A concealed swivel provides 385° horizontal rotation and vertical adjustment from 0° to 90°. The swivel is permanently tensioned, allowing the luminaire to remain fixed at any angle. Luminaire can be locked in place by depressing a hinged (`lever lock') bar so that it lies flush with the top of the housing. Lifting the lever lock frees the swivel.

Lens holder assembly accepts one or two of a number of Optical Accessories including spread lenses and color filters. Complimentary Beam Smoother is included. Note that, for enhanced efficiency, cross-baffles are not included. Lens holder assembly is spring-mounted for easy removal and adjustment.

MiniMax luminaires have seamless aluminum housings and cast aluminum tops for lightweight durability and heat dissipation. Standard finish is matte white; also available in black and silver. A white switch is provided with white luminaires and a black switch with black or silver luminaires. For custom color luminaires (CC) specifier must indicate white or black switch.

## APPLICATIONS

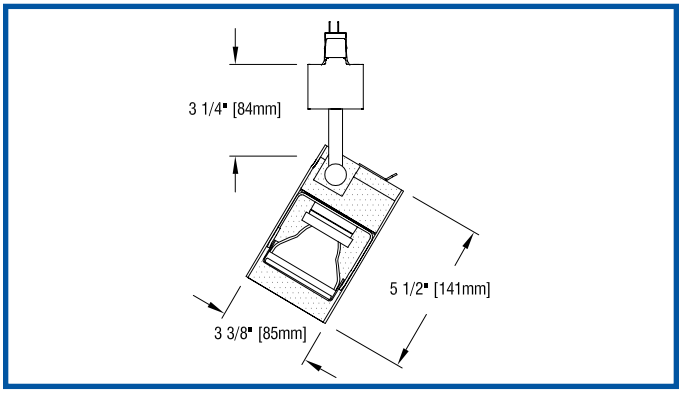


Luminaire is suitable for highlighting vertical or horizontal surfaces, as well as objects in museums, galleries, showrooms, residences, offices and stores.

Luminaire is individually fused and cSAus listed for mounting on Edison Price Lighting 120-volt or 277-volt track.

**Fixture Spacing Requirements** The track adapters of MiniMax LED's are 8" long. For this reason they cannot be mounted closer than 8 ¼ " on center and they cannot be used with any of our three Unicep single-fixture track units.

For the outlet box mounted version of this luminaire, see **MiniMax LED O LH-OBM**.




## PRODUCT CODE

*For complete product code, list basic unit and select one item from each following box.*

Basic Unit ..... MM-XSM2-O-LH

Light Output
- 700 lumens / CRI 97 Artist ..... - L07A
- 1000 lumens / CRI 97 Artist..... - L10A
- 1000 lumens / CRI 80+..... - L10S
- 1500 lumens / CRI 80+ Vibrant ..... *3000K only* ..... - L15V
- 1500 lumens / CRI 80+..... - L15S
- 2100 lumens / CRI 80+..... - L21S

Light Color
- 2700 K ..... *not available on 2100 lumen model* ..... -27K
- 3000 K..... - 30K
- 3500 K ..... - 35K
- 4000 K..... - 40K

Beam Spread Reflector *(specify one to ship with fixture)*
- 20° spot ..... - 20D
- 40° flood ..... - 40D
- 60° wide flood ..... - 60D

## OPTIONS *Specify by adding to the product code.*

**Dimmable**.....standard driver is dimmable to 10% with ELV dimmer on 120-volt track only. Dimming not available on 277-volt track.

**Dimmable to 1%** with Lutron driver controlled by incandescent dimmer on 120-volt service only; not available on 277-volt track .....– LU-DMI

**60-amp adapter** required for fixtures to be used on DoubleLine-50, AutoTrak-50 UpLine-50 or AutoBus-120 track systems (fixture's appearance remains the same) .....– 1C

**277-volt adapter** required for fixtures to be used on HighLine or AutoBus-277 track systems. Note: Fixtures on 277-volt track cannot be dimmed and do not include an on-off switch. ..... – HC

**matte black** housing finish .....– BLK

**Industrial Silver** housing finish ..... – SIL

**custom color** paint housing finish *identify color in specification* ..... – CC

## EXTRA REFLECTORS *Specify as separate line items.*

- **20° spot reflector** ..... XSM-REF20
- **40° flood reflector**..... XSM-REF40
- **60° wide flood reflector** ..... XSM-REF60

## OPTICAL ACCESSORIES ▼ *See next page*

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# MINIMAX LED O LH

EDISON PRICE LIGHTING

## OPTICAL ACCESSORIES

*Specify as separate line items.*
*All are 2¾" (70mm) dia. Lenses and filters are glass; screens are aluminum.*

**diffuse glass** ..... DGS/2.75
**prismatic lens** (Solite) ..... PLS/2.75
**55° spread lens** ..... LENS/2.75
**40° x 70° spread lens** ..... LENS/2.75-4070
**beam smoother** *included with fixture* ..... CLR/2.75
**color filters**
Daylight Blue ..... DAY/2.75
Surprise Pink ..... PNK/2.75
amber ..... AMB/2.75
blue ..... BLU/2.75
green ..... GRN/2.75
red ..... RED/2.75
**33% light reduction screen** ..... SCR33/2.75
**50% light reduction screen** ..... SCR50/2.75

## PHOTOMETRIC REPORT (tested per IESNA LM-79-2008)

*Data prorated from UL Verification Services Report No. 331261. Original test report furnished upon request.*

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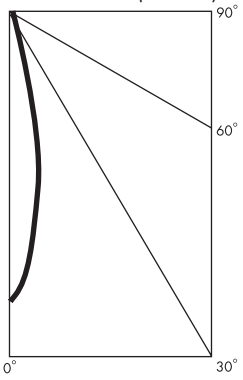
Lamp ..... Xicato XSM LED Module, 1500 lumens, 3000K
Lamp Life ..... rated 50.000 hours based on L70/B50 criteria. LM80 report by LED manufacturer furnished upon request
Luminaire Light Output ..... 1146 lumens

### CANDLEPOWER DISTRIBUTION *(Candela)*

| *Vertical Angle* | *Horizontal Angle* 0 |
|---|---|
| 0 | 4975 |
| 5 | 4278 |
| 15 | 1576 |
| 25 | 567 |
| 35 | 13 |
| 45 | 0 |
| 55 | 0 |
| 65 | 0 |
| 75 | 0 |
| 85 | 0 |
| 90 | 0 |




### LUMINANCE DATA

| *Vertical Angle* | *Candela/m²* |
|---|---|
| 45 | 3076 |
| 55 | 1759 |
| 65 | 1014 |
| 75 | 0 |
| 85 | 0 |

### DRIVER INFORMATION

*(UL Class 2, dry and damp location)*
*Dimmable to 10% with trailing edge (ELV) dimmers*

| *Voltage* | *120* | *277* |
|---|---|---|
| Input Watts (700A/1000A/1000/1500/2100 lumens) | 16/21/15/23/26 | 16/21/15/23/26 |
| Input Current (A) (700A/1000A/1000/1500/2100 lumens) | .13/.18/.13/.19/.22 | .06/.08/.05/.08/.09 |
| Output Current (mA) | 500-1050 | 500-1050 |
| Min. Power Factor | 0.99 | 0.99 |
| Operating Temperature Range (F) | –13 to 122 | –13 to 122 |

### LUMINAIRE LIGHT OUTPUT AND EFFICACY

| *LED Module Type* | *Luminaire Light Output* | *Luminaire Efficacy (lms/watt)* | *System Wattage* |
|---|---|---|---|
| 700 Lumens Artist | 516* | 32 | 16* |
| 1000 Lumens Artist | 653* | 31 | 21* |
| 1000 Lumens standard | 721* | 48 | 15 |
| 1500 Lumens standard & Vibrant | 1146* | 50 | 23* |
| 2100 Lumens standard | 1455* | 56 | 26 |

**estimated values*

### LIGHT OUTPUT MULTIPLIER

| *700 lumens Artist* | *1000 lumens Artist* | *1000 lumens* | *1500 lumens standard & Vibrant* | *2100 lumens* |
|---|---|---|---|---|
| .45 *(estimated)* | .57 *(estimated)* | .63 *(estimated)* | 1 | 1.27 *(estimated)* |

# SIGHTLINE® S

*surface track system*

Spec Sheet

TA1

TRACK SYSTEMS 10-100

## FEATURES

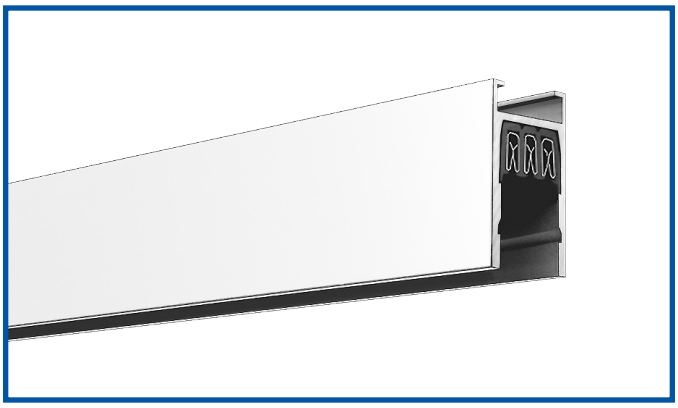
SightLine S is a surface mounted track system suitable for wiring with one or two 20 amp circuits. Tracks can be cut to length in the field. Tracks are mounted to ceilings or walls by means of heavy-duty hanger assemblies which separate the track only ¼" from the mounting surface.

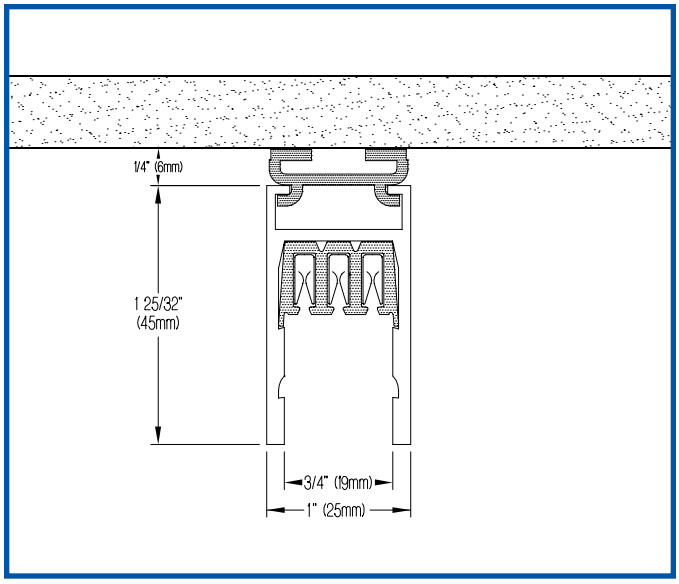
Extruded aluminum tracks, feeds and joints offer a number of benefits:

- elegant appearance, with hairline joints between components
- 6' spans between attachment points, rather than the usual 4'
- exceptional durability for heavy use and long life.

SightLine S is designed so that it completely contains the adapter of the fixture. This feature allows track fixtures to hang from simple ½" diameter stems free of unsightly screws, levers or knobs.

The SightLine S system consists of 15 components, including L, T and X joints and seven kinds of electrical feed. All outlet box feeds include a unique tool-free cover. Standard finish for SightLine S components is matte white; also available in black and Industrial Silver matte paint finishes *(see over)*.

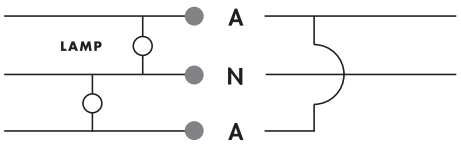




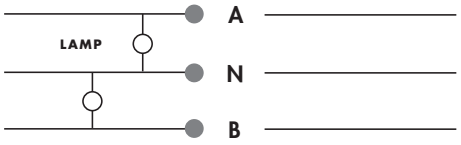

## WIRING

SightLine can be wired in two ways.

**Single Circuit** limited to 120 volts, 20 amps, single phase.




**Two-Circuit** limited to 20 amps each, 120/240 volts, split single phase.




## APPLICATIONS

System is recommended for museums, galleries, showrooms, retail stores, offices, schools or residences – wherever adjustable wallwash or accent lighting is required and especially where the lighting program is changed often.

SightLine S is designed to be mounted to ceilings and vertical surfaces and to support and power Edison Price Lighting track fixtures prepared for 20-amp, 120-volt service only.

System is 3-conductor, continuously grounded. It may be supplied by one or two individually switched, 120 volt, 20 amp branch circuits. Total capacity is 40 amps when supplied by a single phase, 120/240 volt, three-wire branch circuit. Prewired feeds use #12 stranded wire. Service wire brought directly to feed terminals must be #12 AWG solid wire.

All components are c UL us listed for indoor use only.

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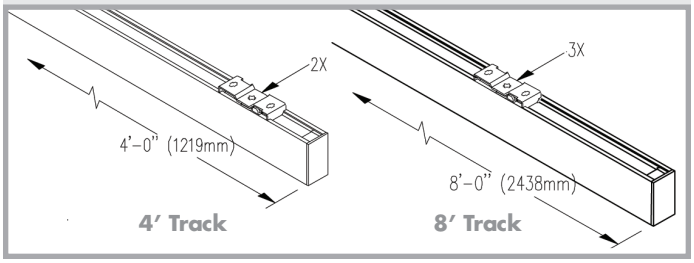
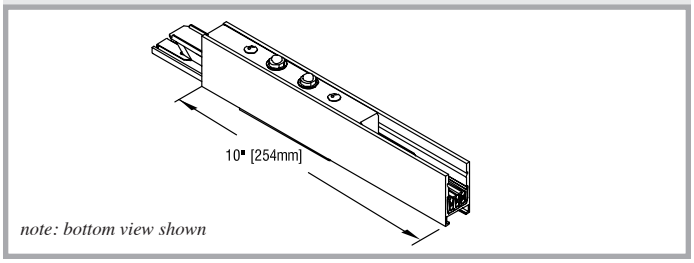
# SIGHTLINE S

## TRACK



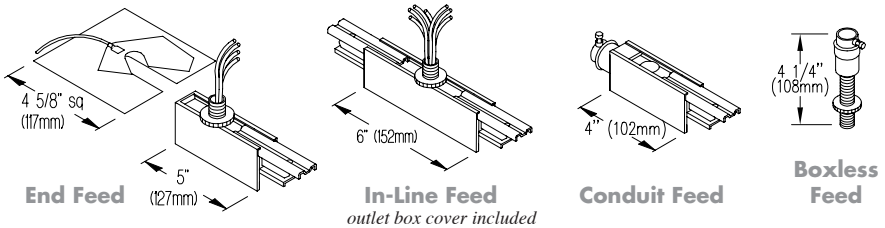

## CURRENT LIMITERS

*for use where required by local code*

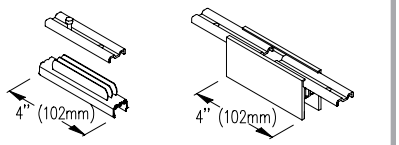



*note: bottom view shown*

## FEEDS

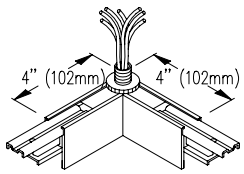



## SPLICES




## L-JOINT AND L-JOINT FEED

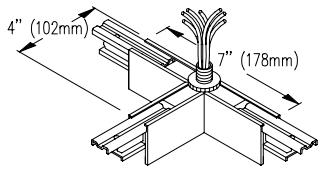
*outlet box cover incl.*




*L-Joint is identical to L-Joint Feed (shown) but without wire leads*

## T-JOINT AND T-JOINT FEED

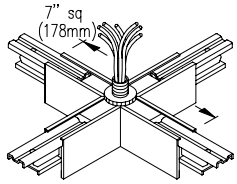
*outlet box cover incl.*




*T-Joint is identical to T-Joint Feed (shown) but without wire leads*

## X-JOINT AND X-JOINT FEED

*outlet box cover incl.*



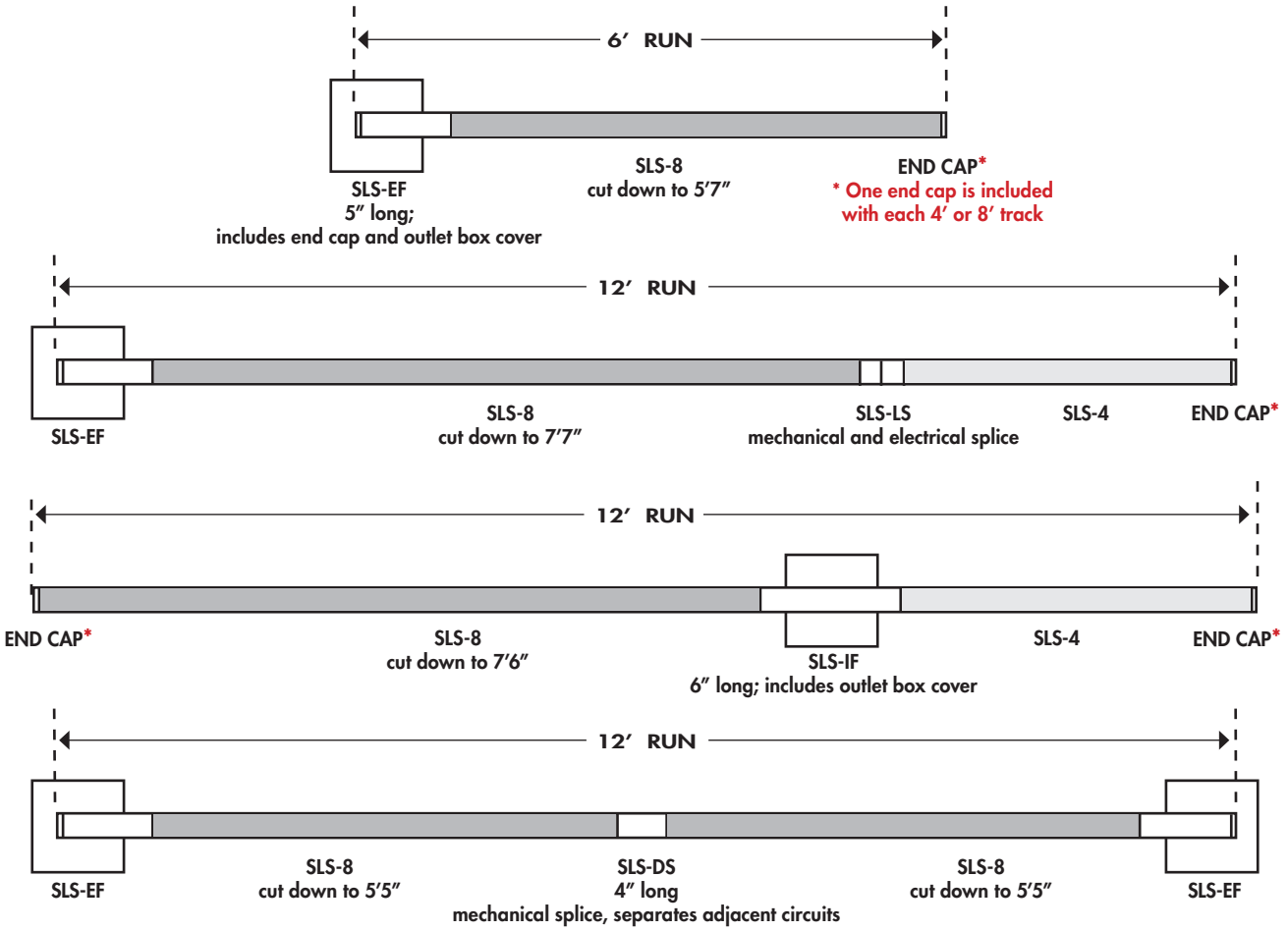

*X-Joint is identical to X-Joint Feed (shown) but without wire leads*

| Component | Product Codes | | | Description |
|---|---|---|---|---|
| | White | Black | Silver | |
| **4' Track** | SLS/4 | SLS/4B | SLS/4S | Individual 4'0" length of track with one end cap and two hangers. |
| **8' Track*** | SLS/8 | SLS/8B | SLS/8S | Individual 8'0" length of track with one end cap and three hangers. |
| **End Feed** | SLS/EF | SLS/EFB | SLS/EFS | Prewired feed for electrical service from an outlet box at the end of a track. Includes outlet box cover. |
| **In-Line Feed** | SLS/IF | SLS/IFB | SLS/IFS | Prewired feed for electrical service between tracks, from an outlet box above. Includes outlet box cover. |
| **Conduit Feed** | SLS/CF | SLS/CFB | SLS/CFS | Feed for electrical service directly into end of track. Includes adapter for ⅜" conduit or BX. |
| **Boxless Feed** | SLS/BLF | SLS/BLFB | SLS/BLFS | Feed for electrical service directly through ceiling without an outlet box. For use with End Feed, In-Line Feed, L-Joint, T-Joint or X-Joint. |
| **Live Splice** | SLS/LS | SLS/LS | SLS/LS | Components for joining two tracks and connecting their electrical conductors. Fits within track. |
| **Dead Splice** | SLS/DS | SLS/DSB | SLS/DSS | Component for joining two tracks without connecting their electrical conductors. Adds 4" to length of track. |
| **L-Joint** | SLS/LJ | SLS/LJB | SLS/LJS | 90° joint prewired to connect circuits of adjacent tracks. Includes loose wire leads and an outlet box cover which allow conversion to an electrical feed. |
| **L-Joint Feed** | SLS/LJF | SLS/LJFB | SLS/LJFS | 90° joint prewired to connect circuits of adjacent tracks and provide electrical service. Incl. outlet box cover. |
| **T-Joint** | SLS/TJ | SLS/TJB | SLS/TJS | T-joint prewired to connect circuits of adjacent tracks. Includes loose wire leads and an outlet box cover which allow conversion to an electrical feed. |
| **T-Joint Feed** | SLS/TJF | SLS/TJFB | SLS/TJFS | T-joint prewired to connect circuits of adjacent tracks and provide electrical service. Incl. outlet box cover. |
| **X-Joint** | SLS/XJ | SLS/XJB | SLS/XJS | X-joint prewired to connect circuits of adjacent tracks. Includes loose wire leads and an outlet box cover which allow conversion to an electrical feed. |
| **X-Joint Feed** | SLS/XJF | SLS/XJFB | SLS/XJFS | X-joint prewired to connect circuits of adjacent tracks and provide electrical service. Incl. outlet box cover. |
| **5A Limiter** | SLS/LIM5 | SLS/LIM5B | SLS/LIM5S | 5-amp capacity current limiter with one reset button for each circuit. California Energy Commission approved. |
| **10A Limiter** | SLS/LIM10 | SLS/LIM10B | SLS/LIM10S | 10-amp capacity current limiter with one reset button for each circuit. California Energy Commission approved. |

** Note: • 12' lengths of track are available on special order; contact factory.*
*• For wall-mounted installations specify "double hangers" and mount hangers at 24" intervals.*

# SIGHTLINE S

## layout examples

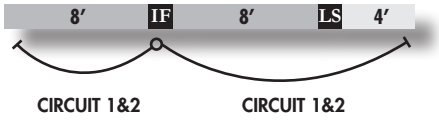



## more examples

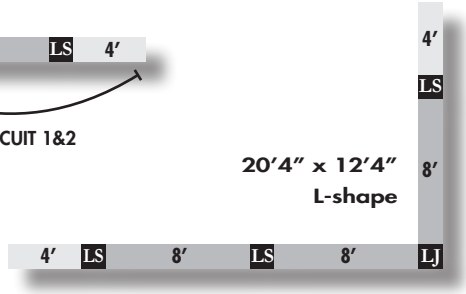
**REMEMBER:** You can cut Sightline S to the lengths you need for your project.

**20′5″ RUN**

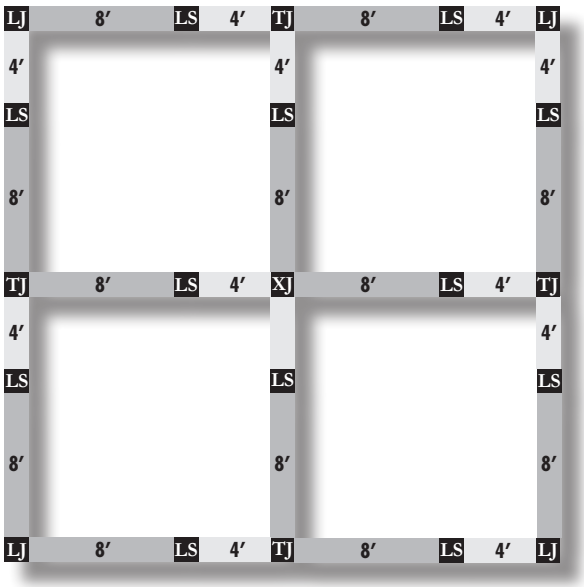
**20′6″ RUN**



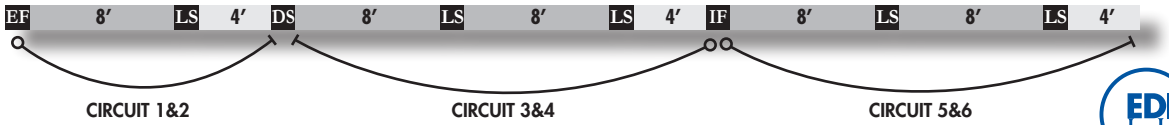

**20′4″ x 12′4″**
**L-shape**




**25′3″ x 25′3″ GRID**




**53′3″ RUN**




EDISON PRICE LIGHTING

# SIGHTLINE® S

*surface track system*

Spec Sheet

TA2

TRACK SYSTEMS 10-100

## FEATURES

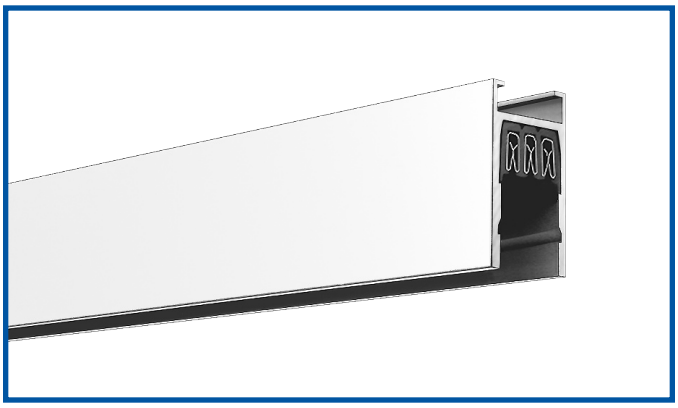
SightLine S is a surface mounted track system suitable for wiring with one or two 20 amp circuits. Tracks can be cut to length in the field. Tracks are mounted to ceilings or walls by means of heavy-duty hanger assemblies which separate the track only ¼" from the mounting surface.

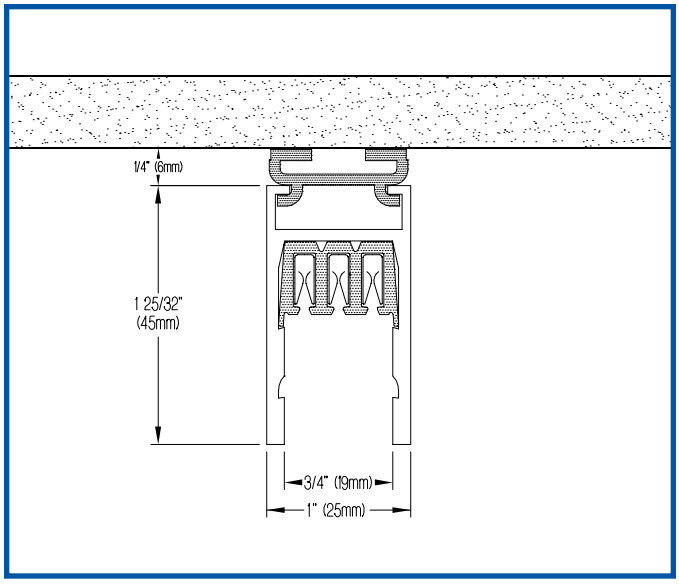
Extruded aluminum tracks, feeds and joints offer a number of benefits:

- elegant appearance, with hairline joints between components
- 6' spans between attachment points, rather than the usual 4'
- exceptional durability for heavy use and long life.

SightLine S is designed so that it completely contains the adapter of the fixture. This feature allows track fixtures to hang from simple ½" diameter stems free of unsightly screws, levers or knobs.

The SightLine S system consists of 15 components, including L, T and X joints and seven kinds of electrical feed. All outlet box feeds include a unique tool-free cover. Standard finish for SightLine S components is matte white; also available in black and Industrial Silver matte paint finishes *(see over)*.

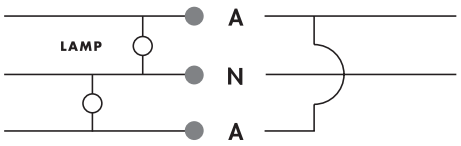




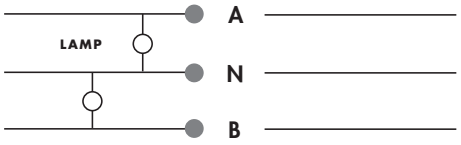

## WIRING

SightLine can be wired in two ways.

**Single Circuit** limited to 120 volts, 20 amps, single phase.




**Two-Circuit** limited to 20 amps each, 120/240 volts, split single phase.




## APPLICATIONS

System is recommended for museums, galleries, showrooms, retail stores, offices, schools or residences – wherever adjustable wallwash or accent lighting is required and especially where the lighting program is changed often.

SightLine S is designed to be mounted to ceilings and vertical surfaces and to support and power Edison Price Lighting track fixtures prepared for 20-amp, 120-volt service only.

System is 3-conductor, continuously grounded. It may be supplied by one or two individually switched, 120 volt, 20 amp branch circuits. Total capacity is 40 amps when supplied by a single phase, 120/240 volt, three-wire branch circuit. Prewired feeds use #12 stranded wire. Service wire brought directly to feed terminals must be #12 AWG solid wire.

All components are c UL us listed for indoor use only.

EDISON PRICE LIGHTING

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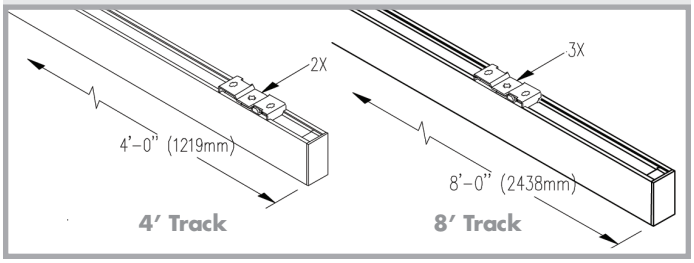
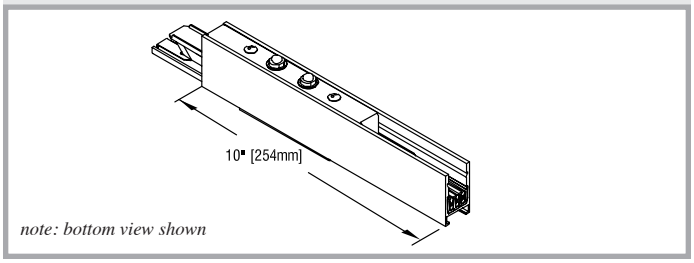
# SIGHTLINE S

## TRACK



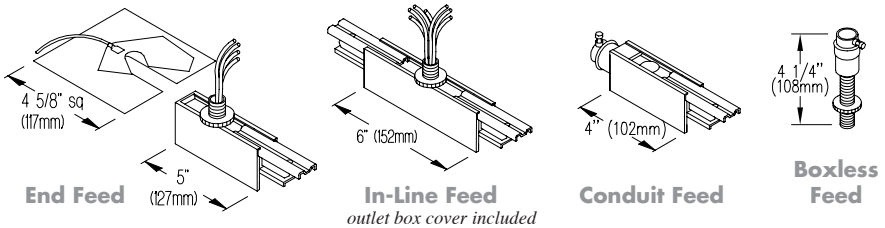

## CURRENT LIMITERS

*for use where required by local code*

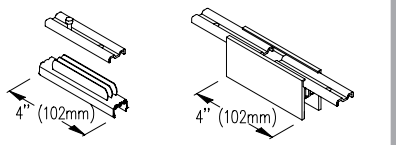



*note: bottom view shown*

## FEEDS

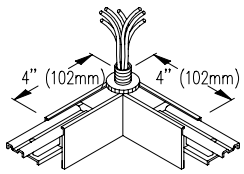



## SPLICES




## L-JOINT AND L-JOINT FEED

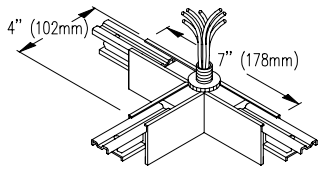
*outlet box cover incl.*




*L-Joint is identical to L-Joint Feed (shown) but without wire leads*

## T-JOINT AND T-JOINT FEED

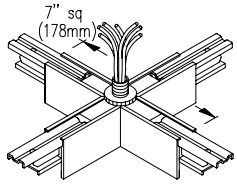
*outlet box cover incl.*




*T-Joint is identical to T-Joint Feed (shown) but without wire leads*

## X-JOINT AND X-JOINT FEED

*outlet box cover incl.*



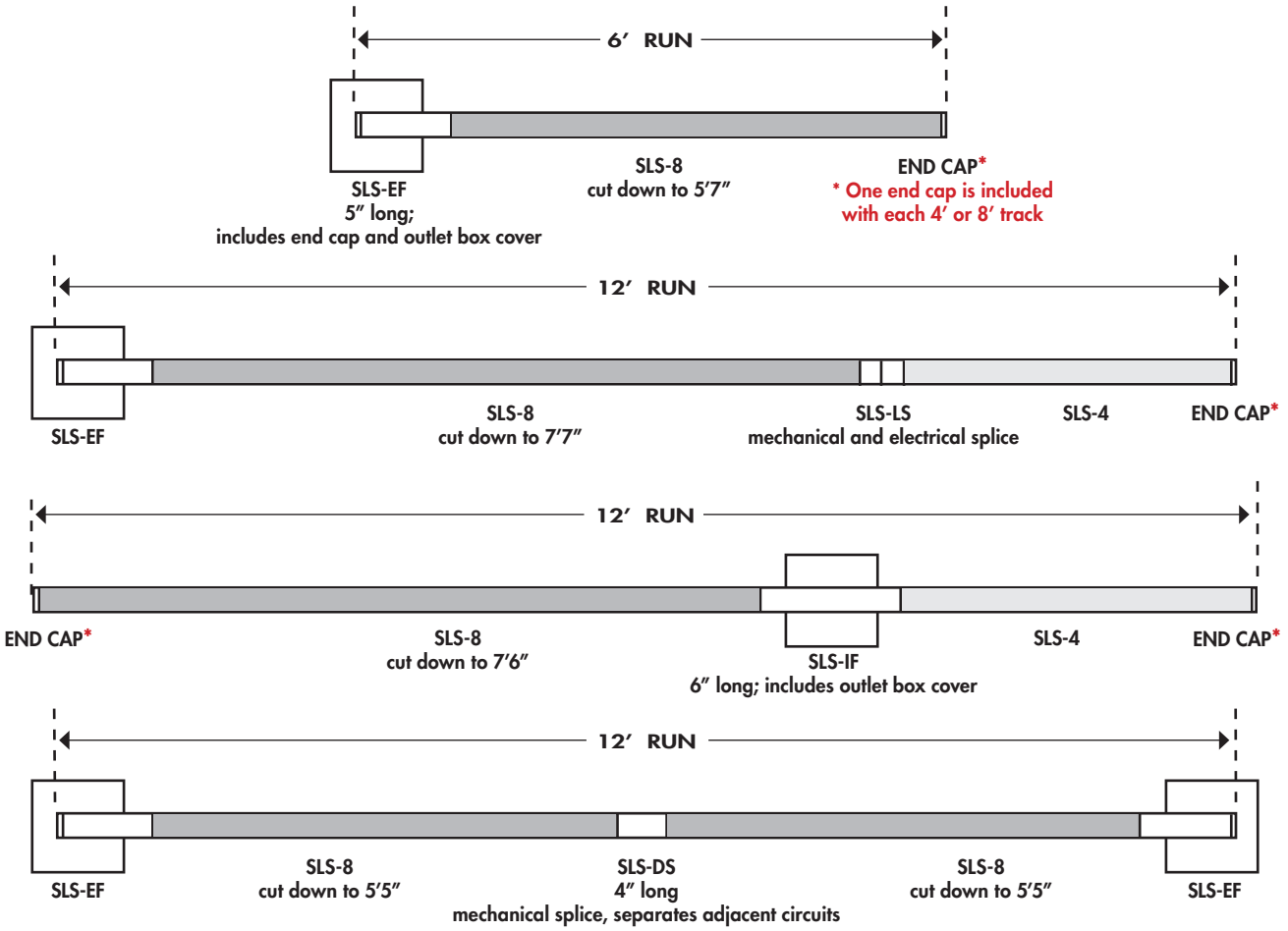

*X-Joint is identical to X-Joint Feed (shown) but without wire leads*

| Component | Product Codes | | | Description |
|---|---|---|---|---|
| | White | Black | Silver | |
| **4' Track** | SLS/4 | SLS/4B | SLS/4S | Individual 4'0" length of track with one end cap and two hangers. |
| **8' Track*** | SLS/8 | SLS/8B | SLS/8S | Individual 8'0" length of track with one end cap and three hangers. |
| **End Feed** | SLS/EF | SLS/EFB | SLS/EFS | Prewired feed for electrical service from an outlet box at the end of a track. Includes outlet box cover. |
| **In-Line Feed** | SLS/IF | SLS/IFB | SLS/IFS | Prewired feed for electrical service between tracks, from an outlet box above. Includes outlet box cover. |
| **Conduit Feed** | SLS/CF | SLS/CFB | SLS/CFS | Feed for electrical service directly into end of track. Includes adapter for ⅜" conduit or BX. |
| **Boxless Feed** | SLS/BLF | SLS/BLFB | SLS/BLFS | Feed for electrical service directly through ceiling without an outlet box. For use with End Feed, In-Line Feed, L-Joint, T-Joint or X-Joint. |
| **Live Splice** | SLS/LS | SLS/LS | SLS/LS | Components for joining two tracks and connecting their electrical conductors. Fits within track. |
| **Dead Splice** | SLS/DS | SLS/DSB | SLS/DSS | Component for joining two tracks without connecting their electrical conductors. Adds 4" to length of track. |
| **L-Joint** | SLS/LJ | SLS/LJB | SLS/LJS | 90° joint prewired to connect circuits of adjacent tracks. Includes loose wire leads and an outlet box cover which allow conversion to an electrical feed. |
| **L-Joint Feed** | SLS/LJF | SLS/LJFB | SLS/LJFS | 90° joint prewired to connect circuits of adjacent tracks and provide electrical service. Incl. outlet box cover. |
| **T-Joint** | SLS/TJ | SLS/TJB | SLS/TJS | T-joint prewired to connect circuits of adjacent tracks. Includes loose wire leads and an outlet box cover which allow conversion to an electrical feed. |
| **T-Joint Feed** | SLS/TJF | SLS/TJFB | SLS/TJFS | T-joint prewired to connect circuits of adjacent tracks and provide electrical service. Incl. outlet box cover. |
| **X-Joint** | SLS/XJ | SLS/XJB | SLS/XJS | X-joint prewired to connect circuits of adjacent tracks. Includes loose wire leads and an outlet box cover which allow conversion to an electrical feed. |
| **X-Joint Feed** | SLS/XJF | SLS/XJFB | SLS/XJFS | X-joint prewired to connect circuits of adjacent tracks and provide electrical service. Incl. outlet box cover. |
| **5A Limiter** | SLS/LIM5 | SLS/LIM5B | SLS/LIM5S | 5-amp capacity current limiter with one reset button for each circuit. California Energy Commission approved. |
| **10A Limiter** | SLS/LIM10 | SLS/LIM10B | SLS/LIM10S | 10-amp capacity current limiter with one reset button for each circuit. California Energy Commission approved. |

** Note: • 12' lengths of track are available on special order; contact factory.*
*• For wall-mounted installations specify "double hangers" and mount hangers at 24" intervals.*

# SIGHTLINE S

## layout examples

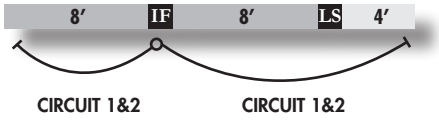



## more examples

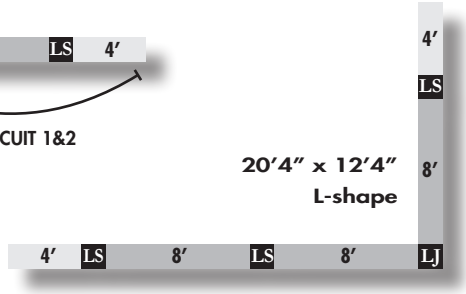
**REMEMBER:** You can cut Sightline S to the lengths you need for your project.

**20′5″ RUN**

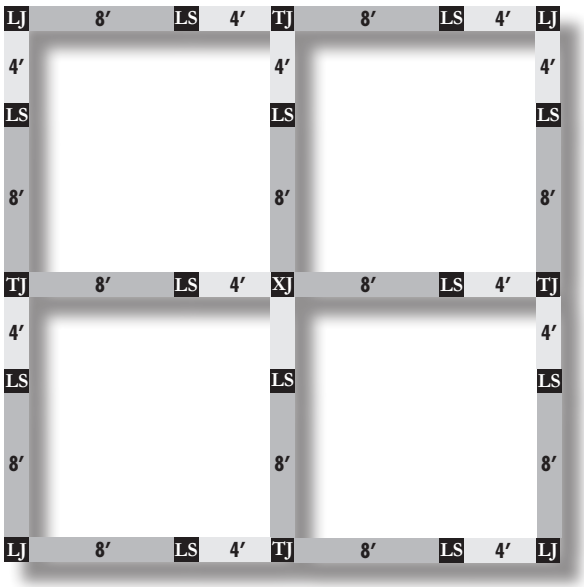
**20′6″ RUN**



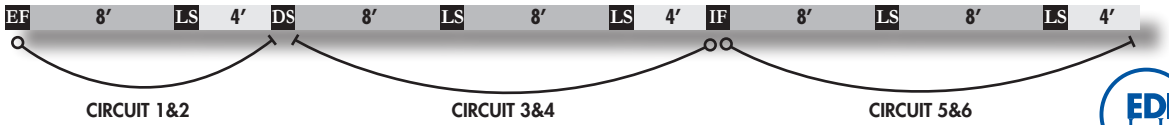

**20′4″ x 12′4″**
**L-shape**




**25′3″ x 25′3″ GRID**




**53′3″ RUN**




EDISON PRICE LIGHTING

# SIGHTLINE® P

*pendant mounted track system*

TB

Spec Sheet



## FEATURES

SightLine P is a pendant mounted track system suitable for wiring with one or two 20 amp circuits. Tracks can be cut to length in the field. Tracks are hung from ceilings by means of ½" or .675" outside diameter pendants.

Pendants of ½" OD can each contain four #12 feed wires (by others), sufficient for two 20 amp circuits; 3/8 IPS pendants (.675" OD) can each contain seven #12 feed wires (by others), sufficient for four 20 amp circuits.

Extruded aluminum tracks, feeds and joints offer a number of benefits:

- elegant appearance, with hairline joints between components
- 6' spans between attachment points, rather than the usual 4'
- exceptional durability for heavy use and long life.

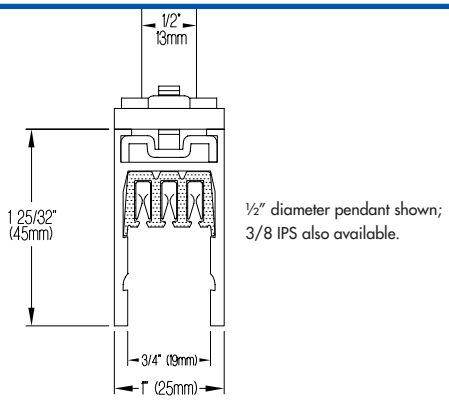
SightLine P consists of 11 components *(see over)*. Components are available in matte white, black and Industrial Silver paint finishes.

## APPLICATIONS

System is recommended for museums, galleries, showrooms, retail stores, offices, schools or residences – wherever adjustable lighting is required and especially where the lighting program is changed often.

SightLine P is designed to be mounted to ceilings from a 4" x 2 ⅛" deep octagonal outlet box with an ⅜ IPS stud that has been mounted sucrely to the ceiling structure. SightLine P is intended to support and power Edison Price Lighting track fixtures prepared for 20-amp, 120-volt service only.

System is 3-conductor, continuously grounded. It may be supplied by one or two individually switched, 120 volt, 20 amp branch circuits. Total capacity is 40 amps when supplied by a single phase, 120/240 volt, three-wire branch circuit. Service wire brought to feed terminals must be #12 AWG solid wire. All components are c UL us listed for indoor use only.




½" diameter pendant shown; 3/8 IPS also available.

## COMPONENTS

▶ SightLine P consists of 11 components described on the reverse side.

▶ SightLine P pendants should be hung from 4" x 2 ⅛" deep octagonal outlet boxes complete with 3/8 IPS studs (both by others) securely mounted to the ceiling structure.

## PENDANTS

*All pendants may be cut and rethreaded in the field.*

**18" pendant, white.** ½" (13mm) OD; can contain four #12 wires (by others); ¼–18 NPS thread ..... 18P
*same 18" pendant,* **black** ..... 18PB
*same 18" pendant,* **Industrial Silver** ..... 18PS

**36" pendant, white** ..... 36P
*same 36" pendant,* **black** ..... 36PB
*same 36" pendant,* **Industrial Silver** ..... 36PS

**18" high capacity pendant, white.** ⅜ IPS (.675"/17mm OD); can contain seven #12 wires (by others); ⅜–18 NPS thread ..... 18PX
*same 18" high capacity pendant,* **black** ..... 18PXB
*same 18" high capacity pendant,* **Industrial Silver** ..... 18PXS

**36" high capacity pendant, white** ..... 36PX
*same 36" high capacity pendant,* **black** ..... 36PXB
*same 36" high capacity pendant,* **Industrial Silver** ..... 36PXS

## PENDANT HARDWARE

▶ All items below may be used with either ½" (13mm) or .675" (17mm) OD pendants.

▶ All items below are designed for use with 4" x 2 ⅛" deep octagonal outlet boxes complete with 3/8 IPS studs (both by others) securely mounted to the ceiling structure.

**outlet box cover kit, white.** flat 4 ½" (114mm) ..... OBC
*same cover,* **black** ..... OBCB
*same cover,* **Industrial Silver** ..... OBCS

**canopy kit, white.** 5" (127mm) dia x 1⅝" (41mm) deep ..... CPY
*same canopy,* **black** ..... CPYB
*same canopy,* **Industrial Silver** ..... CPYS

**swivel kit, white.** 4 ½" (114mm) dia; 45° max sloped ceiling ..... SVL
*same swivel,* **black** ..... SVLB
*same swivel,* **Industrial Silver** ..... SVLS

## WIRING

*Wiring preparations are identical to SightLine S. See wiring diagram on page 10-100.*

EDISON PRICE LIGHTING

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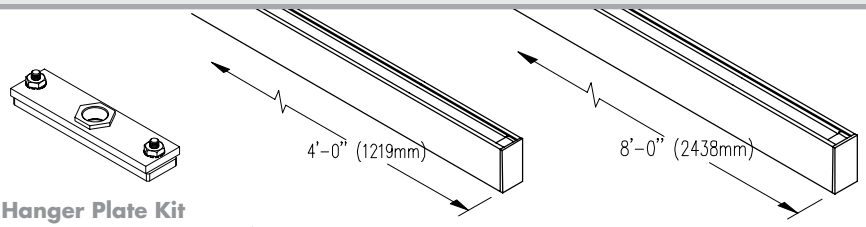
# SIGHTLINE® P

EDISON PRICE LIGHTING

## TRACK

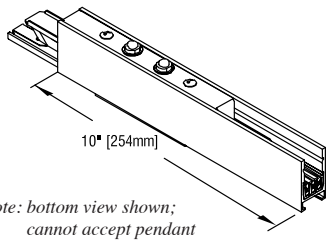



**Hanger Plate Kit**
*one included with each 4' Track*
*two included with each 8' Track*

**4' Track**

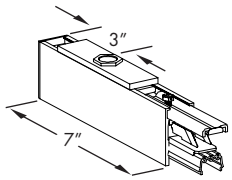
**8' Track**

## CURRENT LIMITERS *for use where required by local code*

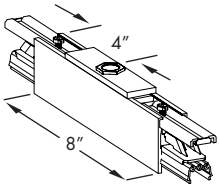



*note: bottom view shown; cannot accept pendant*

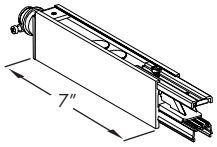
## FEEDS




**End Feed**

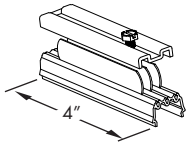



**In-Line Feed**

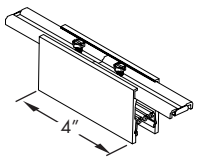



**Conduit Feed**
*note: cannot accept pendant*

## SPLICES

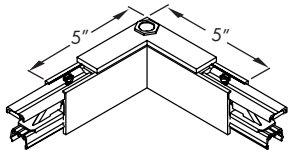



**Live Splice**

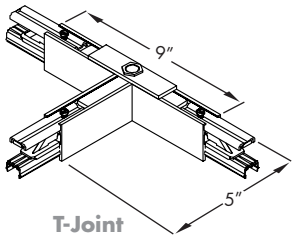



**Dead Splice**

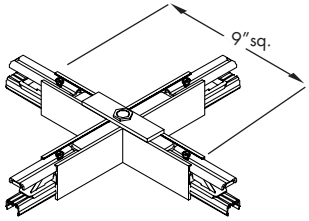
## JOINTS




**L-Joint**




**T-Joint**




**X-Joint**

| Component | Product Codes | | | Description |
|---|---|---|---|---|
| | White | Black | Silver | |
| **4' Track** | SLP/4 | SLP/4B | SLP/4S | Individual 4'0" length of track with one end cap and one hanger plate. |
| **8' Track*** | SLP/8 | SLP/8B | SLP/8S | Individual 8'0" length of track with one end cap and two hanger plates. |
| **End Feed** | SLP/EF | SLP/EFB | SLP/EFS | Feed for electrical service through a pendant; for use at end of track run. |
| **In-Line Feed** | SLP/IF | SLP/IFB | SLP/IFS | Feed for electrical service through a pendant; for use at an intermediate location on track run. |
| **Conduit Feed** | SLP/CF | SLP/CFB | SLP/CFS | Feed for electrical service directly into end of track. Includes adapter for ¾" conduit or BX. |
| **Live Splice** | SLP/LS | SLP/LS | SLP/LS | Components for joining two tracks and connecting their electrical conductors. Fits within track. |
| **Dead Splice** | SLP/DS | SLP/DSB | SLP/DSS | Component for joining two tracks without connecting their electrical conductors. Adds 4" to length of track. |
| **L-Joint** | SLP/LJ | SLP/LJB | SLP/LJS | 90° joint prewired to connect circuits of adjacent tracks by means of removable 'jumper' wires. May also be used for electrical service through a pendant. |
| **T-Joint** | SLP/TJ | SLP/TJB | SLP/TJS | T-joint prewired to connect circuits of adjacent tracks by means of removable 'jumper' wires. May also be used for electrical service through a pendant. |
| **X-Joint** | SLP/XJ | SLP/XJB | SLP/XJS | X-joint prewired to connect circuits of adjacent tracks by means of removable 'jumper' wires. May also be used for electrical service through a pendant. |
| **5A Limiter** | SLP/LIM5 | SLP/LIM5B | SLP/LIM5S | 5-amp capacity current limiter with reset button for ea. circuit. California Energy Commission approved. |
| **10A Limiter** | SLP/LIM10 | SLP/LIM10B | SLP/LIM10S | 10-amp capacity current limiter with reset button for ea. circuit. California Energy Commission approved. |

** Note: 12' lengths of track are available on special order; contact factory.*

# SIGHTLINE® S

*surface track system*

Spec Sheet

TC

TRACK SYSTEMS 10-100

## FEATURES

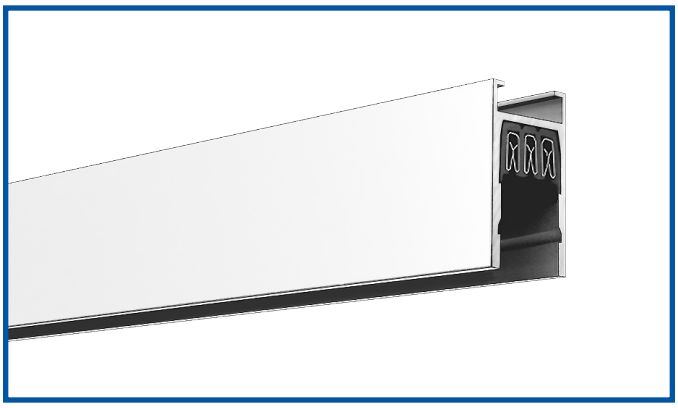
SightLine S is a surface mounted track system suitable for wiring with one or two 20 amp circuits. Tracks can be cut to length in the field. Tracks are mounted to ceilings or walls by means of heavy-duty hanger assemblies which separate the track only ¼" from the mounting surface.

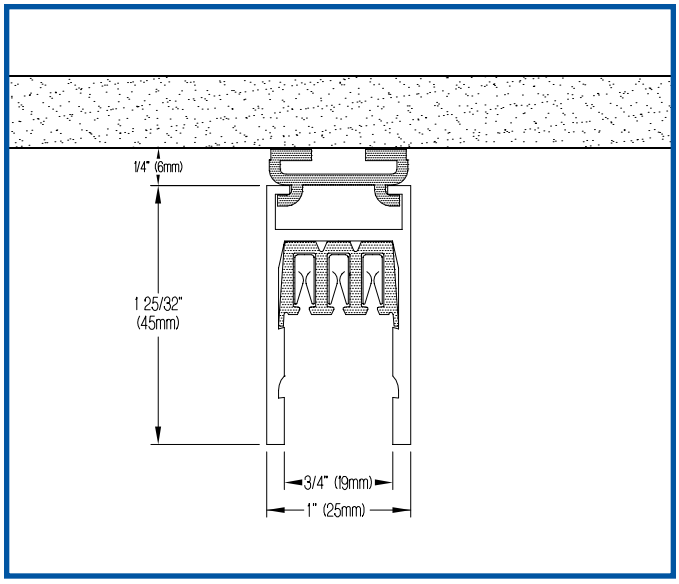
Extruded aluminum tracks, feeds and joints offer a number of benefits:

- elegant appearance, with hairline joints between components
- 6' spans between attachment points, rather than the usual 4'
- exceptional durability for heavy use and long life.

SightLine S is designed so that it completely contains the adapter of the fixture. This feature allows track fixtures to hang from simple ½" diameter stems free of unsightly screws, levers or knobs.

The SightLine S system consists of 15 components, including L, T and X joints and seven kinds of electrical feed. All outlet box feeds include a unique tool-free cover. Standard finish for SightLine S components is matte white; also available in black and Industrial Silver matte paint finishes *(see over)*.

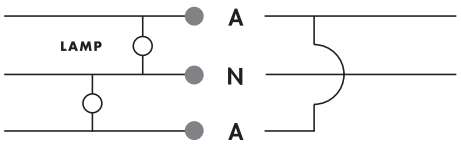




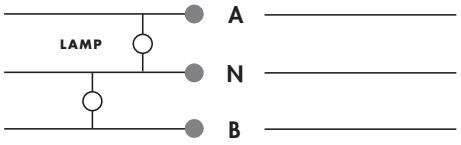

## WIRING

SightLine can be wired in two ways.

**Single Circuit** limited to 120 volts, 20 amps, single phase.




**Two-Circuit** limited to 20 amps each, 120/240 volts, split single phase.




## APPLICATIONS

System is recommended for museums, galleries, showrooms, retail stores, offices, schools or residences – wherever adjustable wallwash or accent lighting is required and especially where the lighting program is changed often.

SightLine S is designed to be mounted to ceilings and vertical surfaces and to support and power Edison Price Lighting track fixtures prepared for 20-amp, 120-volt service only.

System is 3-conductor, continuously grounded. It may be supplied by one or two individually switched, 120 volt, 20 amp branch circuits. Total capacity is 40 amps when supplied by a single phase, 120/240 volt, three-wire branch circuit. Prewired feeds use #12 stranded wire. Service wire brought directly to feed terminals must be #12 AWG solid wire.

All components are c UL us listed for indoor use only.

EDISON PRICE LIGHTING

41-50 22ND STREET, LIC NY 11101 TEL 718.685.0700 FAX 718.786.8530 www.epl.com

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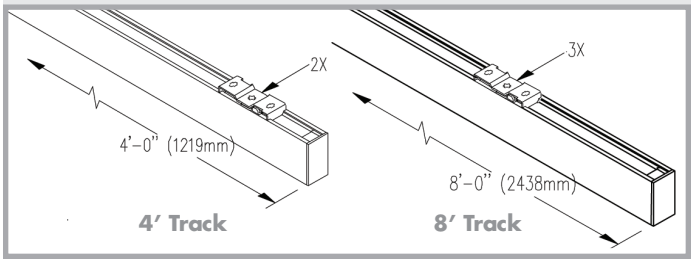
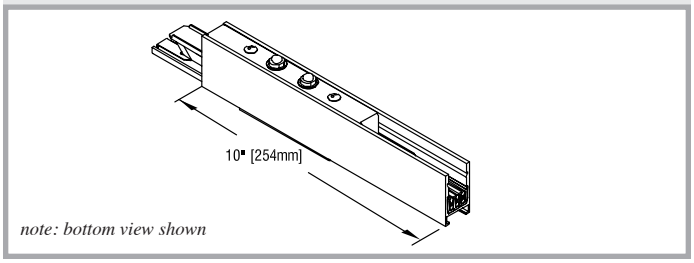
# SIGHTLINE S

## TRACK



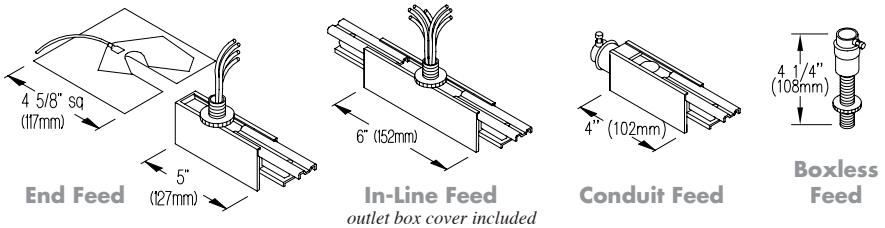

## CURRENT LIMITERS

*for use where required by local code*

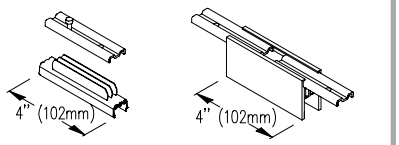



*note: bottom view shown*

## FEEDS

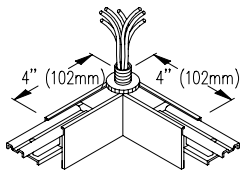



## SPLICES




## L-JOINT AND L-JOINT FEED

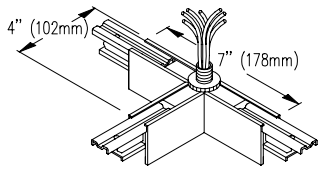
*outlet box cover incl.*




*L-Joint is identical to L-Joint Feed (shown) but without wire leads*

## T-JOINT AND T-JOINT FEED

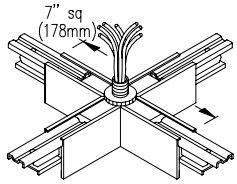
*outlet box cover incl.*




*T-Joint is identical to T-Joint Feed (shown) but without wire leads*

## X-JOINT AND X-JOINT FEED

*outlet box cover incl.*



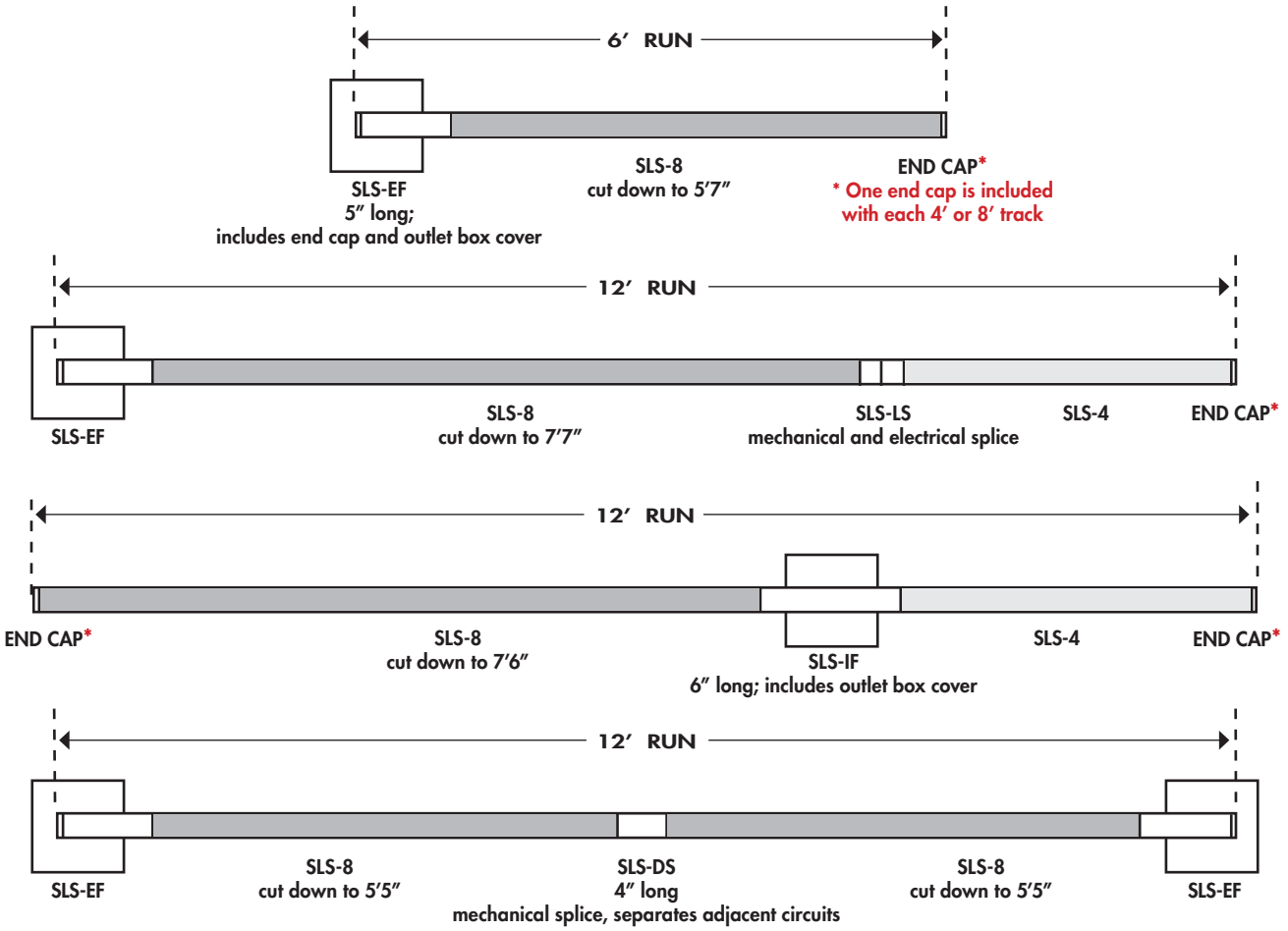

*X-Joint is identical to X-Joint Feed (shown) but without wire leads*

| Component | Product Codes | | | Description |
|---|---|---|---|---|
| | White | Black | Silver | |
| **4' Track** | SLS/4 | SLS/4B | SLS/4S | Individual 4'0" length of track with one end cap and two hangers. |
| **8' Track*** | SLS/8 | SLS/8B | SLS/8S | Individual 8'0" length of track with one end cap and three hangers. |
| **End Feed** | SLS/EF | SLS/EFB | SLS/EFS | Prewired feed for electrical service from an outlet box at the end of a track. Includes outlet box cover. |
| **In-Line Feed** | SLS/IF | SLS/IFB | SLS/IFS | Prewired feed for electrical service between tracks, from an outlet box above. Includes outlet box cover. |
| **Conduit Feed** | SLS/CF | SLS/CFB | SLS/CFS | Feed for electrical service directly into end of track. Includes adapter for ⅜" conduit or BX. |
| **Boxless Feed** | SLS/BLF | SLS/BLFB | SLS/BLFS | Feed for electrical service directly through ceiling without an outlet box. For use with End Feed, In-Line Feed, L-Joint, T-Joint or X-Joint. |
| **Live Splice** | SLS/LS | SLS/LS | SLS/LS | Components for joining two tracks and connecting their electrical conductors. Fits within track. |
| **Dead Splice** | SLS/DS | SLS/DSB | SLS/DSS | Component for joining two tracks without connecting their electrical conductors. Adds 4" to length of track. |
| **L-Joint** | SLS/LJ | SLS/LJB | SLS/LJS | 90° joint prewired to connect circuits of adjacent tracks. Includes loose wire leads and an outlet box cover which allow conversion to an electrical feed. |
| **L-Joint Feed** | SLS/LJF | SLS/LJFB | SLS/LJFS | 90° joint prewired to connect circuits of adjacent tracks and provide electrical service. Incl. outlet box cover. |
| **T-Joint** | SLS/TJ | SLS/TJB | SLS/TJS | T-joint prewired to connect circuits of adjacent tracks. Includes loose wire leads and an outlet box cover which allow conversion to an electrical feed. |
| **T-Joint Feed** | SLS/TJF | SLS/TJFB | SLS/TJFS | T-joint prewired to connect circuits of adjacent tracks and provide electrical service. Incl. outlet box cover. |
| **X-Joint** | SLS/XJ | SLS/XJB | SLS/XJS | X-joint prewired to connect circuits of adjacent tracks. Includes loose wire leads and an outlet box cover which allow conversion to an electrical feed. |
| **X-Joint Feed** | SLS/XJF | SLS/XJFB | SLS/XJFS | X-joint prewired to connect circuits of adjacent tracks and provide electrical service. Incl. outlet box cover. |
| **5A Limiter** | SLS/LIM5 | SLS/LIM5B | SLS/LIM5S | 5-amp capacity current limiter with one reset button for each circuit. California Energy Commission approved. |
| **10A Limiter** | SLS/LIM10 | SLS/LIM10B | SLS/LIM10S | 10-amp capacity current limiter with one reset button for each circuit. California Energy Commission approved. |

** Note: • 12' lengths of track are available on special order; contact factory.*
*• For wall-mounted installations specify "double hangers" and mount hangers at 24" intervals.*

# SIGHTLINE S

## layout examples

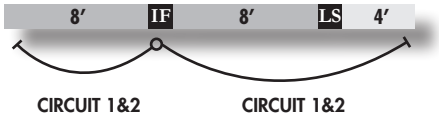



## more examples

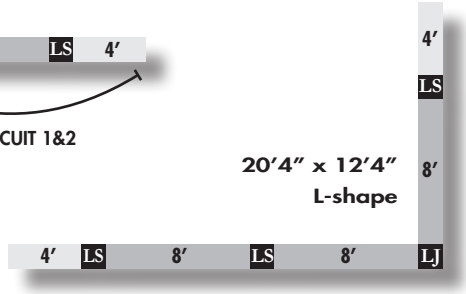
**REMEMBER:** You can cut Sightline S to the lengths you need for your project.

**20′5″ RUN**

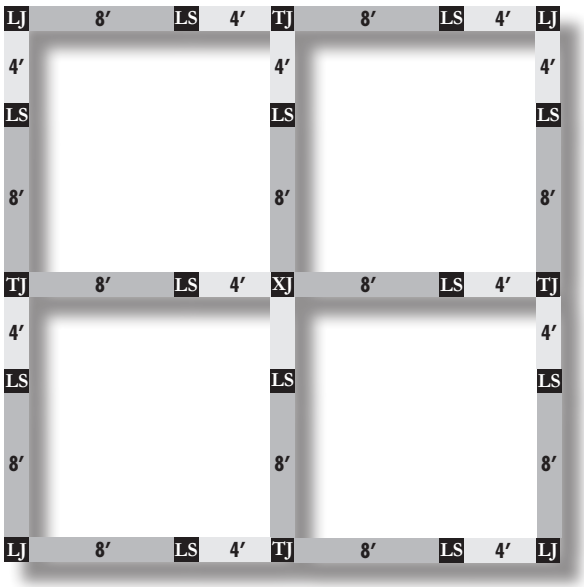
**20′6″ RUN**



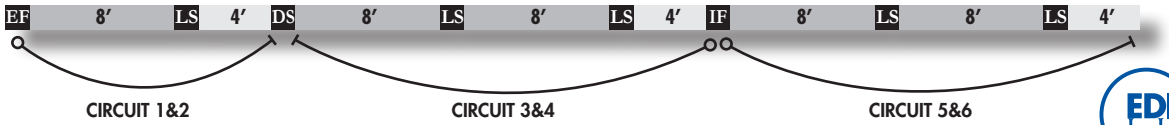

**20′4″ x 12′4″**
**L-shape**




**25′3″ x 25′3″ GRID**




**53′3″ RUN**




EDISON PRICE LIGHTING

# SIGHTLINE® S

*surface track system*

Spec Sheet

TD

TRACK SYSTEMS
10-100

## FEATURES

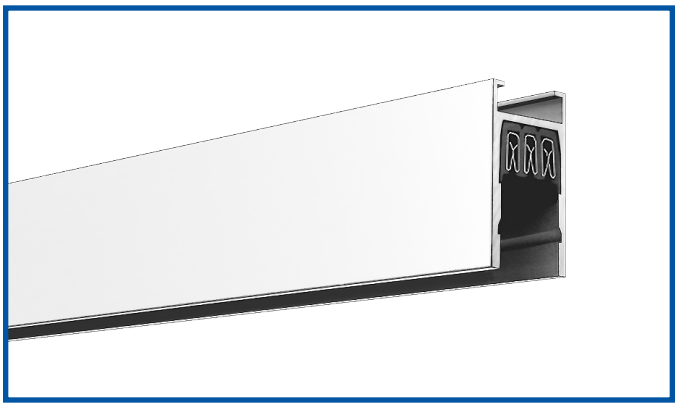
SightLine S is a surface mounted track system suitable for wiring with one or two 20 amp circuits. Tracks can be cut to length in the field. Tracks are mounted to ceilings or walls by means of heavy-duty hanger assemblies which separate the track only ¼" from the mounting surface.

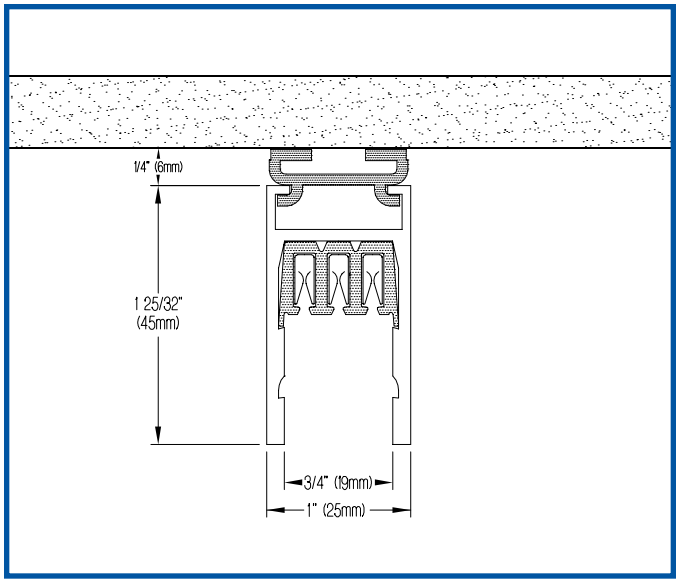
Extruded aluminum tracks, feeds and joints offer a number of benefits:

- elegant appearance, with hairline joints between components
- 6' spans between attachment points, rather than the usual 4'
- exceptional durability for heavy use and long life.

SightLine S is designed so that it completely contains the adapter of the fixture. This feature allows track fixtures to hang from simple ½" diameter stems free of unsightly screws, levers or knobs.

The SightLine S system consists of 15 components, including L, T and X joints and seven kinds of electrical feed. All outlet box feeds include a unique tool-free cover. Standard finish for SightLine S components is matte white; also available in black and Industrial Silver matte paint finishes *(see over)*.

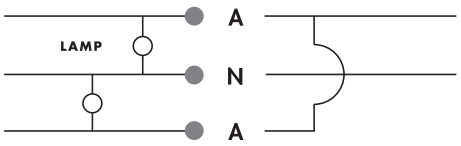




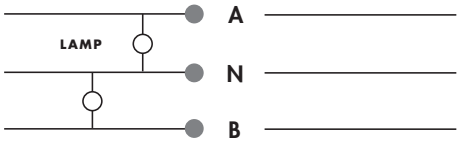

## WIRING

SightLine can be wired in two ways.

**Single Circuit** limited to 120 volts, 20 amps, single phase.




**Two-Circuit** limited to 20 amps each, 120/240 volts, split single phase.




## APPLICATIONS

System is recommended for museums, galleries, showrooms, retail stores, offices, schools or residences – wherever adjustable wallwash or accent lighting is required and especially where the lighting program is changed often.

SightLine S is designed to be mounted to ceilings and vertical surfaces and to support and power Edison Price Lighting track fixtures prepared for 20-amp, 120-volt service only.

System is 3-conductor, continuously grounded. It may be supplied by one or two individually switched, 120 volt, 20 amp branch circuits. Total capacity is 40 amps when supplied by a single phase, 120/240 volt, three-wire branch circuit. Prewired feeds use #12 stranded wire. Service wire brought directly to feed terminals must be #12 AWG solid wire.

All components are c UL us listed for indoor use only.

EDISON PRICE LIGHTING

41-50 22ND STREET, LIC NY 11101 TEL 718.685.0700 FAX 718.786.8530 www.epl.com

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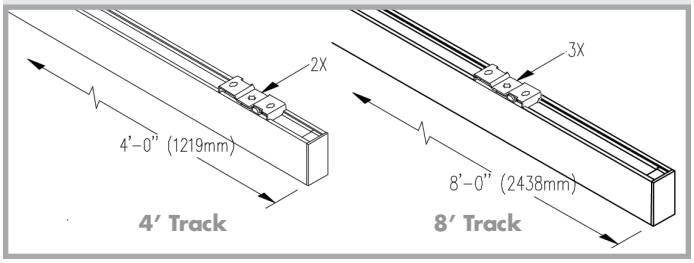
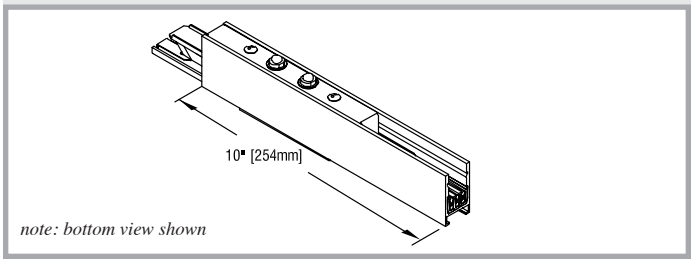
# SIGHTLINE S

## TRACK



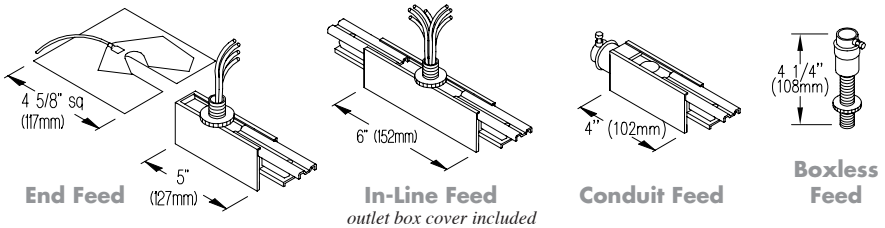

## CURRENT LIMITERS

*for use where required by local code*

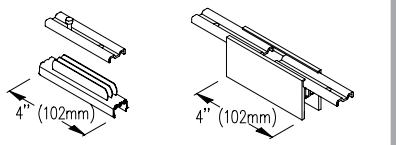



*note: bottom view shown*

## FEEDS

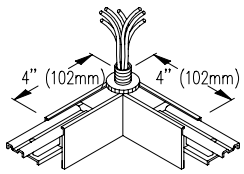



## SPLICES




## L-JOINT AND L-JOINT FEED

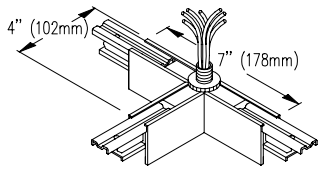
*outlet box cover incl.*




*L-Joint is identical to L-Joint Feed (shown) but without wire leads*

## T-JOINT AND T-JOINT FEED

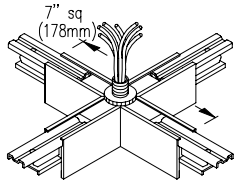
*outlet box cover incl.*




*T-Joint is identical to T-Joint Feed (shown) but without wire leads*

## X-JOINT AND X-JOINT FEED

*outlet box cover incl.*



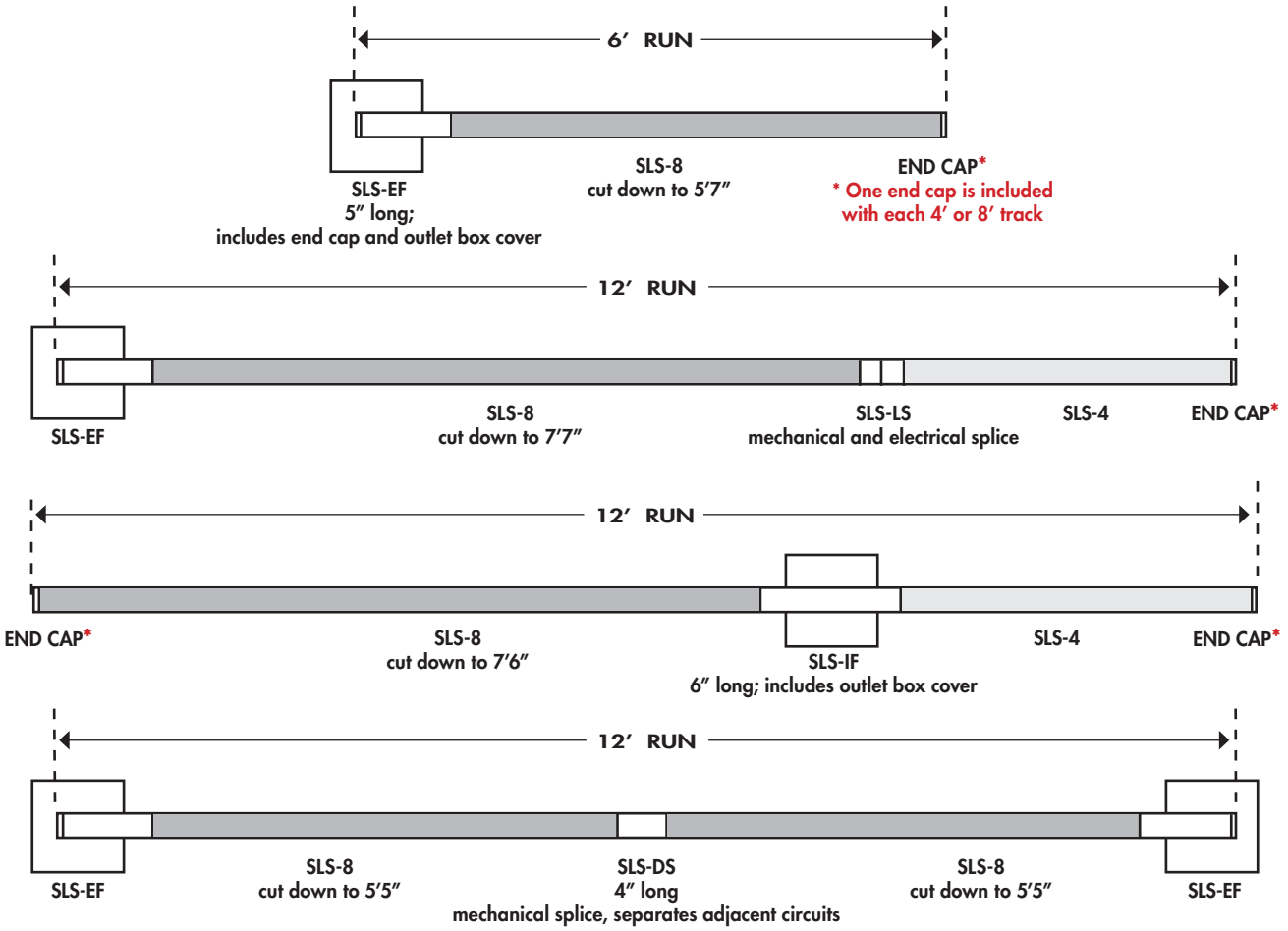

*X-Joint is identical to X-Joint Feed (shown) but without wire leads*

| Component | Product Codes | | | Description |
|---|---|---|---|---|
| | White | Black | Silver | |
| **4' Track** | SLS/4 | SLS/4B | SLS/4S | Individual 4'0" length of track with one end cap and two hangers. |
| **8' Track*** | SLS/8 | SLS/8B | SLS/8S | Individual 8'0" length of track with one end cap and three hangers. |
| **End Feed** | SLS/EF | SLS/EFB | SLS/EFS | Prewired feed for electrical service from an outlet box at the end of a track. Includes outlet box cover. |
| **In-Line Feed** | SLS/IF | SLS/IFB | SLS/IFS | Prewired feed for electrical service between tracks, from an outlet box above. Includes outlet box cover. |
| **Conduit Feed** | SLS/CF | SLS/CFB | SLS/CFS | Feed for electrical service directly into end of track. Includes adapter for ⅜" conduit or BX. |
| **Boxless Feed** | SLS/BLF | SLS/BLFB | SLS/BLFS | Feed for electrical service directly through ceiling without an outlet box. For use with End Feed, In-Line Feed, L-Joint, T-Joint or X-Joint. |
| **Live Splice** | SLS/LS | SLS/LS | SLS/LS | Components for joining two tracks and connecting their electrical conductors. Fits within track. |
| **Dead Splice** | SLS/DS | SLS/DSB | SLS/DSS | Component for joining two tracks without connecting their electrical conductors. Adds 4" to length of track. |
| **L-Joint** | SLS/LJ | SLS/LJB | SLS/LJS | 90° joint prewired to connect circuits of adjacent tracks. Includes loose wire leads and an outlet box cover which allow conversion to an electrical feed. |
| **L-Joint Feed** | SLS/LJF | SLS/LJFB | SLS/LJFS | 90° joint prewired to connect circuits of adjacent tracks and provide electrical service. Incl. outlet box cover. |
| **T-Joint** | SLS/TJ | SLS/TJB | SLS/TJS | T-joint prewired to connect circuits of adjacent tracks. Includes loose wire leads and an outlet box cover which allow conversion to an electrical feed. |
| **T-Joint Feed** | SLS/TJF | SLS/TJFB | SLS/TJFS | T-joint prewired to connect circuits of adjacent tracks and provide electrical service. Incl. outlet box cover. |
| **X-Joint** | SLS/XJ | SLS/XJB | SLS/XJS | X-joint prewired to connect circuits of adjacent tracks. Includes loose wire leads and an outlet box cover which allow conversion to an electrical feed. |
| **X-Joint Feed** | SLS/XJF | SLS/XJFB | SLS/XJFS | X-joint prewired to connect circuits of adjacent tracks and provide electrical service. Incl. outlet box cover. |
| **5A Limiter** | SLS/LIM5 | SLS/LIM5B | SLS/LIM5S | 5-amp capacity current limiter with one reset button for each circuit. California Energy Commission approved. |
| **10A Limiter** | SLS/LIM10 | SLS/LIM10B | SLS/LIM10S | 10-amp capacity current limiter with one reset button for each circuit. California Energy Commission approved. |

** Note: • 12' lengths of track are available on special order; contact factory.*
*• For wall-mounted installations specify "double hangers" and mount hangers at 24" intervals.*

# SIGHTLINE S

## layout examples

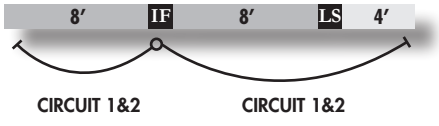



## more examples

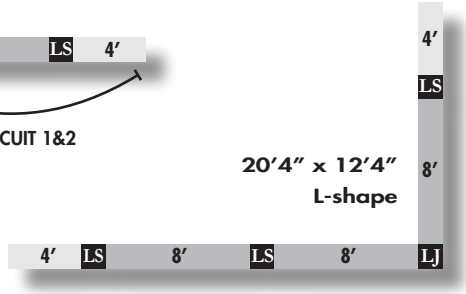
**REMEMBER:** You can cut Sightline S to the lengths you need for your project.

**20′5″ RUN**

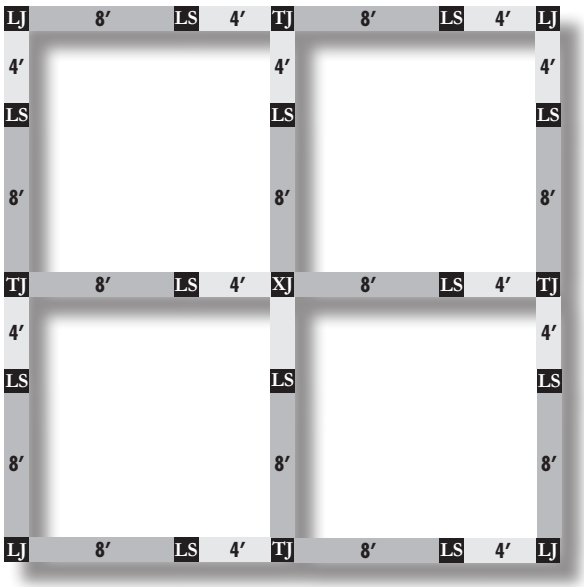
**20′6″ RUN**



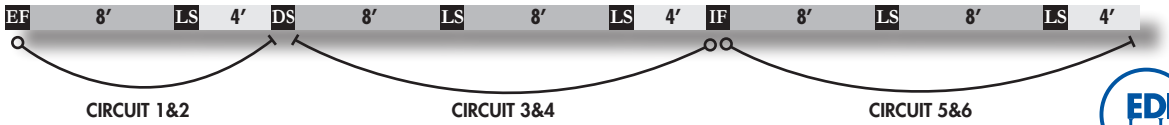

**20′4″ x 12′4″**
**L-shape**




**25′3″ x 25′3″ GRID**




**53′3″ RUN**




EDISON PRICE LIGHTING