



Appendix A

TYPE	DESCRIPTION	LAMP	MANUF.	VOLT.	TOTAL WATTS	BALLAST
A1	2X4 RECESSED, LENSED, GRID CEILING, STATIC, FLUSH STEEL DOOR, TRIPLE GASKETING, STEEL HOUSING WITH WHITE ENAMEL, SPEC. GRADE	(2) F32T8/35000K	LITHONIA SP8	120	73	ELECTRONIC RAPID START
B1	6" SQUARE RECESSED DOWNLIGHT, CLEAR SPECULAR REFLECTOR	(2) F32TBX/3000K 4PIN	KURT VERSON	120	67	DIMMING
B2	DIRECTIONAL RECESSED DOWNLIGHT, DIE CAST ALUMINUM OPTICAL ASSEMBLY	(2) PAR30 35MH/3000K + (2) AR111 75W/3000K	SISTEMA 8240-MH30	120	232	MH DUAL
B3	DIRECTIONAL RECESSED DOWNLIGHT, DIE CAST ALUMINUM OPTICAL ASSEMBLY	(2) PAR30 70MH/3000K + (2) AR111 75W/3000K	SISTEMA 8240-MH70	120	326	MH DUAL
B4	DIRECTIONAL RECESSED DOWNLIGHT, DIE CAST ALUMINUM OPTICAL ASSEMBLY	(2) AR111 75W/3000K	SISTEMA 8220-AR	120	150	NA
B5	CYLINDRICAL DOWNLIGHT, PENDANT MOUNTED, CLEAR ALZAK REFLECTOR, BLACK FINISH, MOUNTING HEIGHT 10' FROM FLOOR	(1) F32TBX/3000K 4 PIN	DELRAY CP8100	120	32	DIMMING
B6	DECORATIVE 9"X9" SQUARE DOWNLIGHT, CLEAR ACRYLIC FINISH WITH TRANSLUCENT DIFFUSED COATING	(2) 32WTBX/3000K	LIGHTOLIER SL207A	120	67	ELECTRONIC RAPID START
B7	4" LOW VOLTAGE DOWNLIGHT, OPEN CLEAR CONE, SPECULAR LOW IRIDESCENT FINISH, LENS OPTION	(1) 20WMR16 FL	GOTHAM DLV	120	20	NA
B8	1" RECESSED DOWNLIGHT, LENSED PINHOLE, FLOOD DISTRIBUTION	(1) 20WMR16 FL	GOTHAM DLV	120	20	NA
D1	CUSTOM DECORATIVE CHANDELIER, FROSTED SQUARE LAMP SHADE, SQUARE SHAPE, COVE FOR HOUSING CEILING HIGHLIGHT FIXTURES, DARK BRONZE FINISH	(108) 40W HALOGEN G9 FROSTED	SEE DETAIL	120	4320	NA
D2	DECORATIVE PENDANT, BRONZE FINISH, CLEAR AND FROSTED GLASS DIFFUSER	(1)40W HALOGEN G9 FROSTED	ZANEEN D4-1027	120	40	NA
O1	SPHERE SHAPED DIE-CAST ALUMINUM HOUSING, PRISMATIC GLASS LENS, RECTANGULAR WIDE DISTRIBUTION, DARK BRONZE FINISH, UL LISTED FOR WET LOCATIONS, FOUR FIXTURE HEADS, ONE MOUNTED AT 19'-8", ONE AT 18'-8", TWO MOUNTED ON SIDES AT 17'-8"	(1) PAR56 100MH/3000K	STERNER CALLISTOR-12	120	125	MH DUAL
O2	LIGHT SPOT WITH 9 LED IN STAINLESS STEEL, OPAL OPTIC COVER, TRANSFORMER INCLUDE IN FIXTURE	(9) WHITE LEDS INCLUDED WITH FIXTURE	ANSORG LED DOT	24	2	NA
O3	COMPACT LINE VOLTAGE FIXTURE, FULLY ADJUSTABLE MOUNTING, SIPHON PROTECTION SYSTEM, BRONZE FINISH, LANDSCAPE ACCENT, UL LISTED FOR WET LOCATIONS	(1) PAR20 50W	LUMIERE CORONADO 806	120	50	NA
O4	RECESSED INGRADE WELL UPLIGHT FIXTURE, CAST BRONZE DOOR, SPOT DISTRIBUTION, DOUBLE LENS, UL LISTED FOR WET LOCATION	(1) PAR56 100MH ED17/3000K	HYDRELL M9700	120	125	MH DUAL
O5	INDIRECT RECESSED HOLE IN THE WALL LIGHT NICHE FOR EXTERIOR STUCCO CONSTRUCTION, UL LISTED FOR WE LOCATIONS	(1) F32TBX/3000K 4 PIN	ENGINEERED LIGHT PRODUCTS HITW-EX	120	36	ELECTRONIC RAPID START

O6	FLEXIBLE LED COMPACT LINEAR RAIL FIXTURE, CLEAR POLYCARBONATE LENS, 8' SECTIONS, UL LISTED FOR WET LOCATIONS, INCLUDE TRANSFORMER	LED OPTION	ARDEE CLM	12	48	48
O7	SPHERE SHAPED DIE-CAST ALUMINUM HOUSING, PRISMATIC GLASS LENS, RECTANGULAR WIDE DISTRIBUTION, DARK BRONZE FINISH, UL LISTED FOR WET LOCATIONS, TWO FIXTURE HEADS, ONE MOUNTED AT 15'-8", ONE MOUNTED AT 14'-8"	(1) PAR56 70MH/3000K	STERNER CALLISTOR-12	120	88	MH DUAL
P1	ROUND TAPERED STEEL POLE, DARK BRONZE FINISH, 20' POLE HEIGHT	NA	STERNAR RTS	NA	NA	NA
P2	ROUND TAPERED STEEL POLE, DARK BRONZE FINISH, 16' POLE HEIGHT	NA	STERNAR RTS	NA	NA	NA
T1	8" OPEN TRACK FIXTURE, DIFFUSE ALLUMINUM REFL., WIDE FLOOD DISTRIBUTION	(1) PAR30 70MH/3000K	LITHONIA LTD REFL	120	85	MH SINGLE
T2B	SURFACE MOUNTED 120V TRACK SYSTEM, 4' SECTIONS, BLACK FINISH	NA	NORDIC ALUMINUM	120	NA	NA
T3	LOW VOLTAGE DECORATIVE SPOT, SURFACED MOUNTED, WHITE FNISH, SQUARE SHAPED	(1)75W HALOGEN MR20	ZANEEN D9-2018	120	75	NA

Specification Premium T8 Troffers

SP8

Static

Intended Use

Specification premium, high performance, static T8 luminaires provide general illumination for recessed applications; ideal for restricted plenum spaces.

Features

Innovative low-profile design optimized around T8 lamps, low-profile electronic ballasts and T8 compact sockets.

Hemmed sides provide smooth edges for easy handling during installation.

Standard steel door frame features precise flush-mitered corners.

Unique door frame design delivers a premium extruded appearance.

Housing and door frame interface provides a superior mechanical light seal without the use of foam gasketing.

Standard latch provides spring action. Door latches and hinges from either side.

Improved performance – higher fixture efficiency and reduced lamp image.

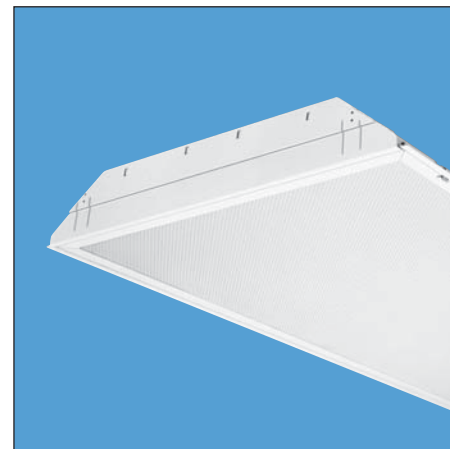
Integral T-bar safety clips are standard – no need to install separate clips.

Aluminum door frames available, flush or regressed.

Compatible with virtually all ceiling types. Field trim modification kits also available. See page 48.

U.S. patents – 6,210,025; 6,231,213; 6,213,625; 2,288,471.

Listings – UL Listed (standard). CSA Certified or NOM Certified (see Options).



Ordering Information

Example: **2SP8 G 3 32 A12 120 1/3 GEB**

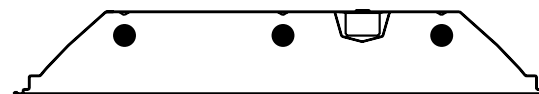
Series	Number of lamps	Frame type	Voltage	Options
2SP8 2' wide	2, 3, 4¹, 6¹ Not included.	(blank) Flush steel, white FN Flush aluminum, natural FM Flush aluminum, matte black FW Flush aluminum, white RN Regressed aluminum, natural RM Regressed aluminum, matte black RW Regressed aluminum, white	120 277 347 MVOLT* Others available. * 120-277V. Must specify GEB10IS.	1/3 One 3-lamp ballast 1/4 One 4-lamp ballast GEB Electronic ballast, ≤20% THD GEB10IS T8 electronic ballast, ≤10% THD, instant start GEB10RS T8 electronic ballast, ≤10% THD, rapid start CSA CSA Certified NOM NOM Certified See pages 90 & 91 for others.
Trim type	Lamp type	Diffuser type		
G Grid F Flanged MT Modular fit-in	17 17W T8 (24") U31 31W T8 U (1 ⁵ / ₈ " leg) U316 31W T8 U (6" leg) ² 32 32W T8 (48") CF39 39W TT5 (16") CF40 40W TT5 (24") CF50 50W TT5 (24") CF55 55W TT5 (24")	A12 #12 pattern acrylic ³ A12125 #12 pattern acrylic, .125" thick RA125 #12 pattern acrylic, .125" thick (reverse apex) A19 #19 pattern acrylic, .156" thick K20 #20 pattern acrylic, .140" thick 84Y Holophane 8224 with overlay PC1S 1/2"x1/2"x1/2" plastic cube louver, silver PC2S 1/2"x1/2"x1" plastic cube louver, silver with flange PC3S 3/4"x3/4"x1/2" plastic cube louver, silver		

NOTES:

- 4- and 6-lamp models available with 17W and 32W straight tubes only.
- Not available on 3-lamp fixtures. Use U31.
- Standard A12 diffuser has reverse apex technology.

Availability and Dimensions

Nominal Size	Series	Number of Lamps	Lamp Type	Height in.(cm)
2x2	2SP8	2	17, U31, U316, CF39	3 ¹¹ / ₁₆ (9.3)
	2SP8	2	CF40, CF50, CF55	3 ¹¹ / ₁₆ (9.3)
	2SP8	3	17, U31, CF39	3 ¹¹ / ₁₆ (9.3)
	2SP8	3	CF40, CF50, CF55	3 ¹¹ / ₁₆ (9.3)
	2SP8	4	17	3 ¹¹ / ₁₆ (9.3)
2x4	2SP8	2, 3, 4, 6	32	3 ¹¹ / ₁₆ (9.3)





Universal Start Fluorescent Lamps

Feature	T8 Medium Bipin featuring HI-VISION® Phosphor
Watts	32
Bulb	T8
Base	Med. Bipin
Product Number	046677-27274-0
Ordering Code	F32T8/TL735/ALTO UPC
Package Quantity	25
Description	TL 735, 3500K
CRI	78
Design Lumens	2710
Nominal Length	48
Approximate Initial Lumens	2850
Rated Avg. Life (Hrs.), 3-Hr. Start	20,000
Rated Avg. Life (Hrs.), 12-Hr. Start	20,000



Images

- + [Family Photo](#)
- + [Product Logo](#)
- + [Product Photo](#)

Literature

- + [Family Brochure](#)
- + [MSDS S09-98001](#)

Other Information

- Energy Saving Product
- Meets US Federal Minimum Efficiency Standard
- + [Printable Page](#)
- + [View Compatible Ballasts](#)
- + [Send this Link](#)
- + [Bookmark this Page](#)

Footnotes

- + Rated average life under specified test conditions with Programmed Start ballasts with lamps turned off and restarted no more frequently than once every 3 operating hours. Lamp life is appreciably longer if lamps are started less frequently.
- + Approximate Initial Lumens. The lamp lumen output is based upon lamp performance after 100 hours of operating life, when the output is measured during operation on a reference ballast under standard laboratory conditions.
- + For expected lamp lumen output, commercial ballast manufacturers can advise the appropriate Ballast Factor for each of their ballasts when they are informed of the designated lamp. The Ballast

Factor is a multiplier applied to the designated lamp lumen output.

+ Design Lumens are the approximate lamp lumen output at 40% of the lamp's Rated Average Life. This output is based upon measurements obtained during lamp operation on a reference ballast under standard laboratory conditions.

+ Universal T8 lamps have full rated life on Instant Start, Rapid Start and Programmed Start ballasts.

+ Features **ALTO**[®] Lamp Technology

+ High Color Rendering Lamps (CRI 70-79)

Information for this product last modified on November 20 2002.

©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. [Privacy policy](#)
[Philips](#). Access to and use of this Web Site is subject to these [Terms of use](#).

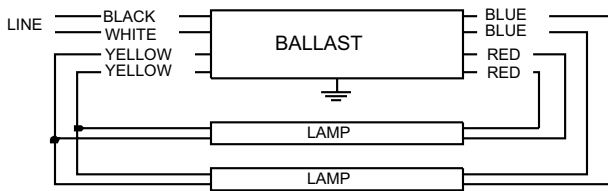


R-2P32-TP	
Brand Name	MARK III
Ballast Type	Magnetic
Starting Method	Rapid Start
Lamp Connection	Series
Input Voltage	120
Input Frequency	60 HZ
Status	Active

Electrical Specifications

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Input Power (Watts)	Ballast Factor	MAX THD %	Power Factor	Lamp Current Crest Factor	B.E.F.
* F32T8	2	32	50/10	0.64	73	0.94	10	0.97	1.4	1.29
F32T8/U	2	31.2	50/10	0.64	73	0.94	10	0.97	1.4	1.29

Wiring Diagram



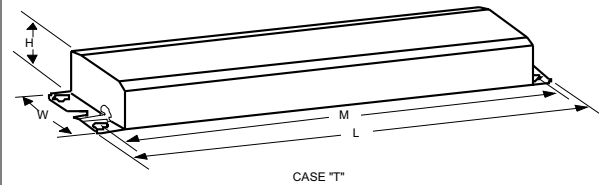
Diag. 21

The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.		in.	cm.
Black	20	50.8	Yellow/Blue		0
White	20	50.8	Blue/White		0
Blue	24	61	Brown		0
Red	24	61	Orange		0
Yellow	36	91.4	Orange/Black		0
Gray		0	Black/White		0
Violet		0	Red/White		0

Enclosure



Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
9.50 "	2.375 "	1.5 "	8.90625 "
9 1/2	2 3/8	1 1/2	8 29/32
24.1 cm	6 cm	3.8 cm	22.6 cm

Revised 08/14/2003

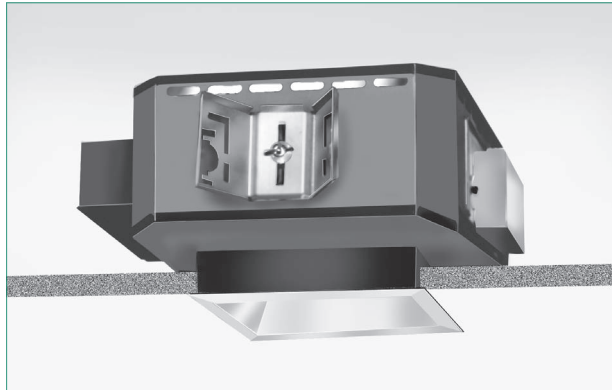
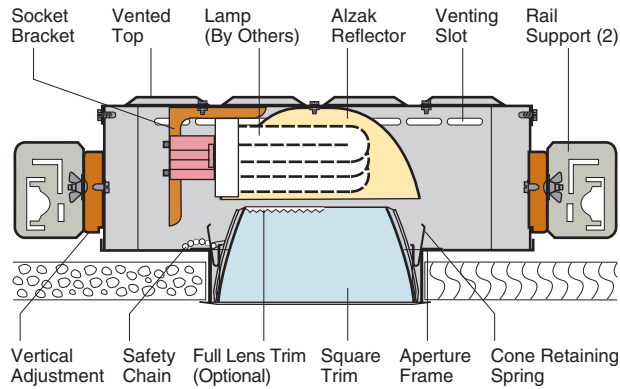


Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

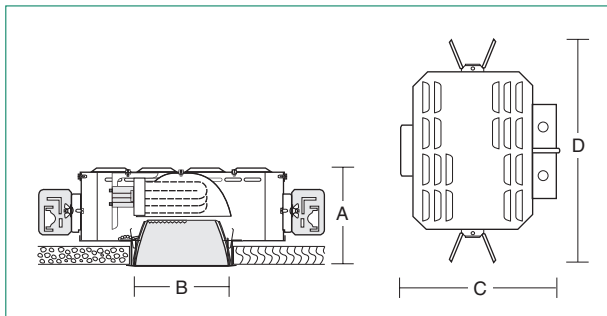
ADVANCE TRANSFORMER CO.
 O'HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018
 Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 630-307-3071
 Corporate Offices: Phone: 800-322-2086

H8643

H23



Dimensions and Lamps



Number	A Depth	B Aperture	C Width	D Length	Lamps
H8643	6 1/2" 165mm	6" sq. 153mm	13 1/2" 343mm	19" 483mm	26-32-42W TripleTube compact fluorescent

Brightness

Number	Lamps	Beam Angle				
		85°	75°	65°	55°	45°
H8643	32W T/E Osram/Syl	31	97	203	1221	10019
	32W PL-T Philips	37	108	218	6698	13729
	42W PL-T Philips	40	151	273	6857	19941
	42W T/E Osram/Syl	53	185	367	4566	17420

Data in footlamberts. Photometer readings, Maximum Brightness Method.

Matching Square Units

Vertical lamp fluorescent	Page H22
Low voltage	Pages H5, H6
PAR lamps	Pages H7, H8, H9
Directional	Page H9
Halogena, A lamps	Page H10
Tungsten halogen	Page H11
Metal halide	Pages H26, H27, H28
Wall washer	Page H37

Shallow Depth, Wide Beam Downlight One 26-32-42W Triple Tube Compact Fluorescent 6" Square Parabolic Trim

Custom (2) 32W Triple Tube Compact Fluorescent, consulted manufacture.

Optics and Applications

The socket is mounted horizontally in an ellipsoidal primary reflector for wide distribution and reduced recess depth in shallow plenums. Use in low to medium height ceilings for corridors, entries and for general and area lighting.

Design Features

A steel housing protects and aligns reflectors and lamps. The socket and ballast will accept all triple tube wattages interchangeably. The square trim is stabilized by a proprietary steel web to prevent racking and is held to the ceiling by constant pressure springs. Maximum ceiling thickness 1 1/2". Ballast and lamp service from below.

Finish

Housings and structural parts are painted matte black to suppress stray light leaks. Standard trims are anodized Softglow® clear. Special finishes, textures and colors are available, see below under Accessories.

Trim Textures

Textured trims create a subtle new aperture appearance. Select among different embossed patterns to match the ambiance of the space being illuminated. Refer to Squares brochure for descriptive photos.

Ballasts

Fully electronic, microprocessor controlled with programmed start to assure rated lamp life. Input voltage ranges from 120V through 277V. Operates 26, 32 or 42W lamps interchangeably. Power factor .98, starting temperature 0°F (-18°C), THD<10%. Pre-heat start < 1.0 second. End of lamp life protection. Rated for > 50,000 starts.

General

Fixtures are pre-wired, UL and C-UL listed for eight wire 75°C branch circuit wiring. Union made IBEW. Luminaire Efficiency Rating (LER) data is in the photometric directory located in Section Z.

Accessories

R2 26" support rails.	WT White trim flange.
R5 52" support rails.	WHT White complete trim.
SB Softglow black.	BP Ball Peen texture.
SG Softglow gold.	CG Corrugated texture.
SH Softglow mocha.	DS Distressed texture.
SP Softglow graphite.	WV Woven texture.
ST Softglow titanium.	LL Linear spread lens.
SW Softglow wheat.	LP Large prism lens.
SY Softglow pewter.	MP Microprism lens.
SZ Softglow bronze.	V347 347 volt ballast.
BR Bright trim finish.	FC Four cell cross baffle.
FR Frosting on lens.	DM Dimming ballast.
F Fuse.	Specify watts and volts.
EM Emergency power includes integral charger light and test switch visible through aperture. Battery operation for 90 minutes.	
FLT6 Full lens trim, specify lens type, e.g. H8643-FLT6LL.	
WRL Wattage restriction label, specify wattage.	

kurt versen

Kurt Versen Company

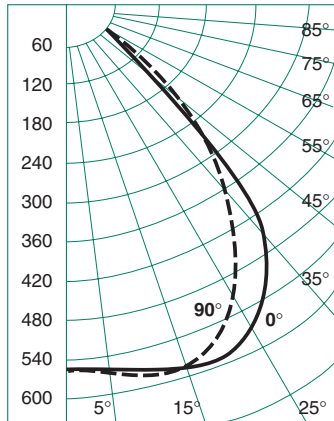
Point Source Lighting
Westwood, New Jersey 07675

H23 H8643

Performance Datachart

Single Unit Initial Footcandles, 30° Work Plane						Ceiling to Floor		Multiple Units Initial Footcandles, 30° Work Plane			
H8643 One 32W Philips Triple Tube Read Top Data								Ceiling 80% Walls 50% Floor 20%			
H8643 One 42W Philips Triple Tube Read Bottom Data								Spacing is Maximum Over Work Plane			
Nadir		10°		20°		30°					
FC	FC	Diam	FC	Diam	FC	Diam					
								Spacing	RCR 1	RCR 3	RCR 8
19	18	2'	16	4'	10	6'	8'	7'	23	19	15
29	27	2'	21	4'	13	6'		6'	38	32	21
21	13	2'	11	5'	7	8'	9'	8'	16	14	11
18	19	2'	15	5'	10	8'		7'	27	23	15
10	10	3'	8	5'	5	9'	10'	9'	12	10	8
16	14	3'	11	5'	7	9'		8'	20	17	11
8	8	3'	7	6'	4	10'	11'	10'	10	8	6
12	11	3'	9	6'	6	10'		9'	16	14	9
6	6	3'	5	7'	3	11'	12'	12'	8	6	5
10	9	3'	7	7'	4	11'		10'	13	11	7

Candlepower Distribution

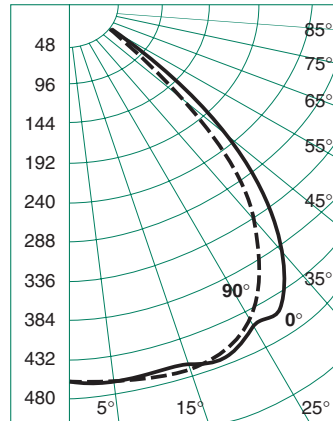


H8643 One 32W Triple Tube Philips
Eff. 39% S/M 0° 1.30 S/M 90° 1.14

Candelas

°	0°	90°
	2400*	2400*
0	560	560
5	561	565
10	568	579
15	585	581
20	588	567
25	558	516
30	521	431
35	455	359
40	358	283
45	256	194
50	165	124
55	92	59
60	22	21
65	9	12
70	0	0
75	0	0
80	0	0
85	0	0
90	0	0

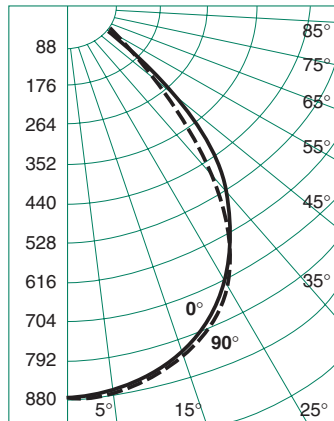
° Vertical Angles
* Initial Lamp Lumens



H8643 One 32W Triple Tube Osram Sylvania
Eff. 33% S/M 0° 1.36 S/M 90° 1.24

°	0°	90°
	2400*	2400*
0	457	457
5	466	460
10	464	470
15	469	476
20	475	473
25	448	452
30	457	399
35	396	337
40	316	255
45	233	170
50	136	99
55	52	34
60	13	14
65	8	9
70	6	7
75	0	0
80	0	0
85	0	0
90	0	0

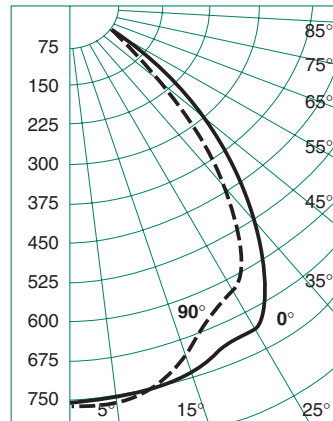
° Vertical Angles
* Initial Lamp Lumens



H8643 One 42W Triple Tube Philips
Eff. 38% S/M 0° 1.07 S/M 90° 1.06

°	0°	90°
	3200*	3200*
0	880	880
5	866	869
10	842	843
15	813	816
20	768	781
25	694	710
30	619	602
35	508	461
40	386	322
45	266	235
50	172	173
55	107	113
60	50	50
65	19	17
70	0	0
75	0	0
80	0	0
85	0	0
90	0	0

° Vertical Angles
* Initial Lamp Lumens



H8643 One 42W Triple Tube Osram Sylvania
Eff. 35% S/M 0° 1.21 S/M 90° 1.13

°	0°	90°
	3200*	3200*
0	757	757
5	750	761
10	751	741
15	746	704
20	725	647
25	718	625
30	632	569
35	529	454
40	408	315
45	288	194
50	185	128
55	102	81
60	40	36
65	15	15
70	0	0
75	0	0
80	0	0
85	0	0
90	0	0

° Vertical Angles
* Initial Lamp Lumens

Notes

- Softglow® cone multipliers: Gold x .89, Wheat x .87, Pewter x .73, Mocha x .75, Graphite x .70, Titanium x .70, Bronze x .68.
- Single unit Datachart pattern diameters are determined by the number of degrees from each side of nadir. Therefore a 20° diameter represents a total 40° pattern width at the work plane 30" above the floor. Footcandle values are at the edge of that diameter.
- Datachart spacing is rounded off to the nearest foot.
- Data by IES methods. Compact fluorescent data vary due to lamp lumen differences, power input, burning position, ambient temperature and ballast characteristics. A modification factor should be applied.
- Brightness data from the Average Luminance Method are inaccurate for small aperture downlights. They are theoretical calculations derived for large surfaces such as troffers. For a complete discussion refer to section Z brochure Z1.

Coefficients of Utilization

Ceiling	80%				70%		50%		30%		0
	70	50	30	10	50	10	50	10	50	10	0
Wall %	Zonal Cavity Method - Floor Reflectance 20%										
RCR											
1	.43	.41	.40	.39	.41	.39	.39	.38	.38	.36	.35
2	.40	.38	.36	.35	.37	.34	.36	.34	.35	.33	.31
3	.38	.35	.33	.31	.34	.31	.33	.30	.32	.30	.29
4	.35	.32	.30	.28	.32	.28	.31	.27	.30	.27	.26
5	.33	.29	.27	.25	.29	.25	.28	.25	.28	.24	.24
6	.31	.27	.25	.23	.27	.23	.26	.22	.26	.22	.22
7	.29	.25	.23	.21	.25	.21	.24	.21	.24	.20	.20
8	.28	.23	.21	.19	.23	.19	.23	.19	.22	.19	.18
9	.26	.22	.19	.18	.22	.18	.21	.17	.21	.17	.17
10	.25	.20	.18	.16	.20	.16	.20	.16	.20	.16	.16

See notes 2, 3 and 4.



PL-T Triple 4-Pin Fluorescent Lamp

Feature	High color rendering, high efficacy lamps feature 4-pin base for use with preheat, rapid start, electronic and dimming circuits. Featuring ALTO [®] Lamp Technology
Watts	32
Bulb	PL-T
Base	GX24q-3
Product Number	046677-26832-6
Ordering Code	PL-T 32W/830/4P/ALTO
Generic Designation	CFTR32W/GX24q/830
Package Quantity	12
Description	3000K
CRI	82
Avg. Hrs. Life	10,000
Design Lumens	2040
M.O.L.	5 5/8
Lumens	2400



Images

- + [ALTO Product Logo](#)
- + [Family Photo](#)
- + [Product Photo](#)

Literature

- + [ALTO Family Brochure](#)
- + [MSDS S08-98001](#)

Other Information

- Energy Saving Product
- + [Printable Page](#)
- + [View Compatible Ballasts](#)
- + [Send this Link](#)
- + [Bookmark this Page](#)

Footnotes

- + This Product Contains Amalgam
- + High Color Rendering Lamp
- + Features **ALTO**[®] Lamp Technology
- + Rated average life under specified test conditions with Programmed Start ballasts with lamps turned off and restarted no more frequently than once every 3 operating hours. Lamp life is appreciably longer if lamps are started less frequently.

+ Approximate Initial Lumens. The lamp lumen output is based upon lamp performance after 100 hours of operating life, when the output is measured during operation on a reference ballast under standard laboratory conditions.

+ Design Lumens are the approximate lamp lumen output at 40% of the lamp's Rated Average Life. This output is based upon measurements obtained during lamp operation on a reference ballast under standard laboratory conditions.

Information for this product last modified on September 25, 2001

©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. [Privacy policy](#)
[Philips](#). Access to and use of this Web Site is subject to these [Terms of use](#).

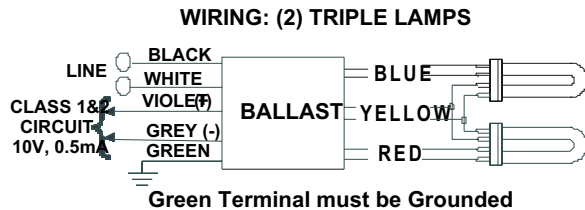


Electrical Specifications

IZT-2T42-M3-BS@120	
Brand Name	MARK VII 0-10V
Ballast Type	Electronic Dimming
Starting Method	Programmed Start
Lamp Connection	Series
Input Voltage	120-277
Input Frequency	50/60 HZ
Status	Active

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Input Power (Watts) (min/max)	Ballast Factor (min/max)	MAX THD %	Power Factor	Lamp Current Crest Factor	B.E.F.
* CFM32W/GX24Q	2	32	50/10	0.63	19/75	0.05/1.00	10	0.99	1.4	1.33
CFM42W/GX24Q	2	42	50/10	0.82	18/98	0.05/1.00	10	0.99	1.4	1.02
CFTR57W/GX24Q	1	57	50/10	0.55	18/66	0.05/1.00	10	0.99	1.7	1.52
CFTR70W/GX24Q	1	70	50/10	0.67	18/80	0.05/1.00	10	0.99	1.7	1.25

Wiring Diagram

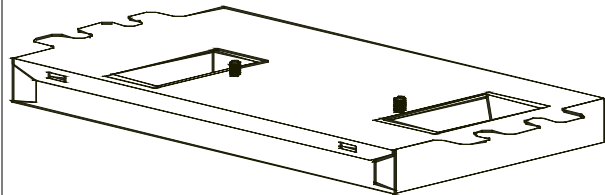


The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.		in.	cm.
Black	0	0	Yellow/Blue		0
White	0	0	Blue/White		0
Blue	0	0	Brown		0
Red	0	0	Orange		0
Yellow	0	0	Orange/Black		0
Gray	0	0	Black/White		0
Violet	0	0	Red/White		0

Enclosure



Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
6.28 "	3.00 "	1.29 "	2.00 "
6 7/25	3	1 29/100	2
16 cm	7.6 cm	3.3 cm	5.1 cm

Revised 08/27/2003



Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

ADVANCE TRANSFORMER CO.

O'HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018
 Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 630-307-3071
 Corporate Offices: Phone: 800-322-2086



IZT-2T42-M3-BS@120	
Brand Name	MARK VII 0-10V
Ballast Type	Electronic Dimming
Starting Method	Programmed Start
Lamp Connection	Series
Input Voltage	120-277
Input Frequency	50/60 HZ
Status	Active

Electrical Specifications

Notes:

Section I - Physical Characteristics

- 1.1 Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.
- 1.2 Ballast shall be available in a plastic/metal can or all metal can construction to meet all plenum requirements.
- 1.3 Ballast shall be provided with poke-in wire trap connectors or integral leads color coded per ANSI C82.11.

Section II - Performance Requirements

- 2.1 Ballast shall be Programmed Start.
- 2.2 Ballast shall be provided with integral protection circuitry to withstand connection of low voltage control leads to mains power supply. In this event, ballast shall default to maximum light output.
- 2.3 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.4 Ballast shall operate from 50/60 Hz input source of 120V or 277V with sustained variations of +/- 10% (voltage and frequency) with no damage to the ballast. IntelliVolt models shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency) with no damage to the ballast.
- 2.5 Ballast shall be high frequency electronic type and operate lamps at a frequency above 42 kHz to avoid interference with infrared devices and eliminate visible flicker.
- 2.6 Ballast shall have a Power Factor greater than 0.98 at full light output and greater than 0.90 throughout the dimming range for primary lamp.
- 2.7 Ballast shall have a maximum ballast factor of 1.00 (1.18 for HL versions) at maximum light output and 0.03 at minimum light output for primary lamp application.
- 2.8 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less throughout the dimming range in accordance with lamp manufacturer recommendations.
- 2.9 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage with primary lamp.
- 2.10 Ballast shall have a Class A sound rating.
- 2.11 Ballast shall have a minimum starting temperature of 10C (50F) for primary lamp.
- 2.12 Ballast shall provide Lamp EOL Protection Circuit for all T5, T5/HO, CFL lamps, and T8 lamps operating on 4-lamp ballast.
- 2.13 Ballast shall control lamp light output from 100% - 3% relative light output for T8 and CFL lamps and 100% - 1% relative light output for T5/HO lamps.
- 2.14 Ballast shall ignite the lamps at any light output setting without first going to another output setting.
- 2.15 Ballast shall tolerate sustained open circuit and short circuit output conditions without damage.

Section III - Regulatory Requirements

- 3.1 Ballast shall not contain any Polychlorinated Biphenyl (PCB).
- 3.2 Ballast shall be Underwriters Laboratories (UL) listed, Class P and Type 1 Outdoor; and Canadian Standards Association (CSA) certified where applicable.
- 3.3 Ballast shall comply with ANSI C62.41 Category A for Transient protection.
- 3.4 Ballast shall comply with ANSI C82.11 where applicable.
- 3.5 Ballast shall comply with the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated).

Section IV - Other

- 4.1 Ballast shall be manufactured in a factory certified to ISO 9002 Quality System Standards.
- 4.2 Ballast shall carry a five-year warranty from date of manufacture against defects in material or workmanship, including replacement, for operation at a maximum case temperature of 70C.

4.3 Manufacturer shall have a fifteen-year history of producing electronic ballasts for the North American market.

4.4 Ballast shall be controlled by a Class 1 or Class 2 low voltage 0-10VDC controller.

4.5 Ballast shall be Advance Transformer part # _____ or approved equal.

Revised 08/27/2003



Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

ADVANCE TRANSFORMER CO.
O'HARE INTERNATIONAL CENTER - 10275 WEST HIGGINS ROAD
ROSEMONT, ILLINOIS 60018
TELEPHONE: (847) 390-5000 FAX: (847) 390-5109

Master of Architecture



Toronto University Architecture Dept.

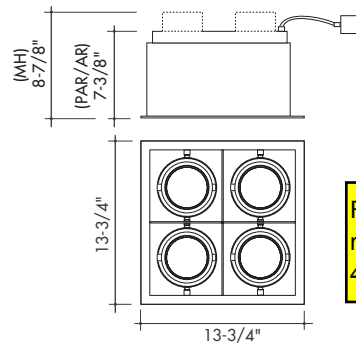
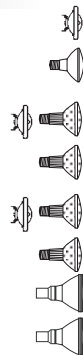




Newtown restaurant, Fofi & Drouin designers

Multiple Large Four

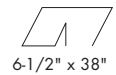
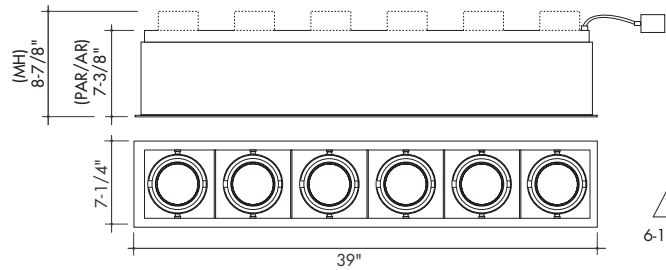
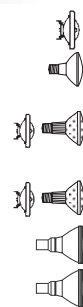
- 8240-AR** 4 x AR 111 75 W
- 8240-PAR** 4 x PAR 30 75 W
- 8240-MH35** 2 x AR 111 75 W +
2 x Metal Halide PAR 30 35 W
- 8240-4MH35** 4 x Metal Halide PAR 30 35 W
- 8240-MH70** 2 x AR 111 75 W +
2 x Metal Halide PAR 30 70 W
- 8240-4MH70** 4 x Metal Halide PAR 30 70 W
- 8340-PAR** 4 x PAR 38 90W
- 8340-MH** 4 x Metal Halide PAR 38 70W



Fixture to be oriented linearly as multiply large six below but with 4 lamps.

Multiple Large Six

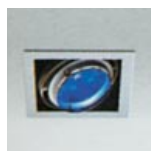
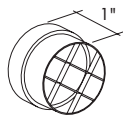
- 8260-AR** 6 x AR 111 75 W
- 8260-PAR** 6 x PAR 30 75 W
- 8260-MH35** 4 x AR 111 75 W +
2 x Metal Halide PAR 30 35 W
- 8260-MH70** 4 x AR 111 75 W +
2 x Metal Halide PAR 30 70 W
- 8360-PAR** 6 x PAR 38 90 W
- 8360-MH** 2 x Metal Halide PAR 38 70W +
4 x PAR 38 90 W



ACCESSORIES FOR MULTIPLE LARGE



- 8211** Cross Baffle for PAR 30
- 8311** Cross Baffle for PAR 38



- 8812 for PAR, AR 111**
- 00 frosted
- 05 red
- 06 yellow
- 09 blue
- 24 clear

These are standard configurations.
Custom configurations available upon request.

PHILIPS**Protected MasterColor® Ceramic Metal Halide Lamp**

Feature	PAR Style. Open or Enclosed Luminaires. Lifetime Color Stability Within +/- 200K
Watts	39
Bulb	PAR-30L
Base	Med.
Product Number	046677-22330-5
Ordering Code	CDM35/PAR30L/M/FL
Package Quantity	6
Description	G, PAR WISO Flood 30 degrees FadeBlock 7400 MBCP
ANSI	M130/O
Code/Ballast Ref.	
CRI	81
Rated Avg. Life (Hrs.)	9000
M.O.L.	4 3/4
Approximate Initial Lumens	2200
Approximate Mean Lumens	1760
CCT	3000

**Images**

- + [Family Photo](#)
- + [Product Logo](#)
- + [Product Photo](#)

Literature

- + [Family Brochure](#)
- + [MSDS S15-95005](#)
- + [Photometric Data](#)
- + [Technical Data Sheet](#)

Other Information

- + [Printable Page](#)
- + [View Compatible Ballasts](#)
- + [Send this Link](#)
- + [Bookmark this Page](#)
- † Heat resisting glass bulb

Footnotes

- + **MasterColor®** Metal Halide Lamps are not recommended for use on dimmers and are not warranted if used on dimmer systems.
- + "Operate only on thermally protected ballasts"
- + UV filtered design (Fade-Block™).
- + [Click here for Recommended Warnings, Cautions and Operating Instructions.](#)
- + Supply volts must be +/- 5% of rated ballast line volts for reactor type and +/- 10% for CWA or electronic ballasts.
- + Requires a ballast specified or approved for Philips Metal Halide lamp or one designed to the

indicated ANSI Standard. A pulse ignitor is required. Sockets and wiring must withstand starting pulse.

- + Approximate lumen output at 40% of lamp rated average life.
- + Approximate lumen values listed are for vertical operation of the lamp.
- + Rated average life is the life obtained, on the average, from large representative groups of lamps in laboratory tests under controlled conditions at 10 or more operating hours per start. It is based on survival of at least 50% of the lamps and allows for individual lamps or groups of lamps to vary considerably from the average. For lamps with a rated average life of 24,000 hours, life is based on survival of 67% of the lamps.
- + ANSI CODE RATING, E - Enclosed, O - Open, S - Open or Enclosed
- + [Click here for specific product and ordering information on this lamp.](#)
- + Heat resisting glass bulb
- + Excellent color rendition - up to 92 CRI

Information for this product last modified on June 22 2004.

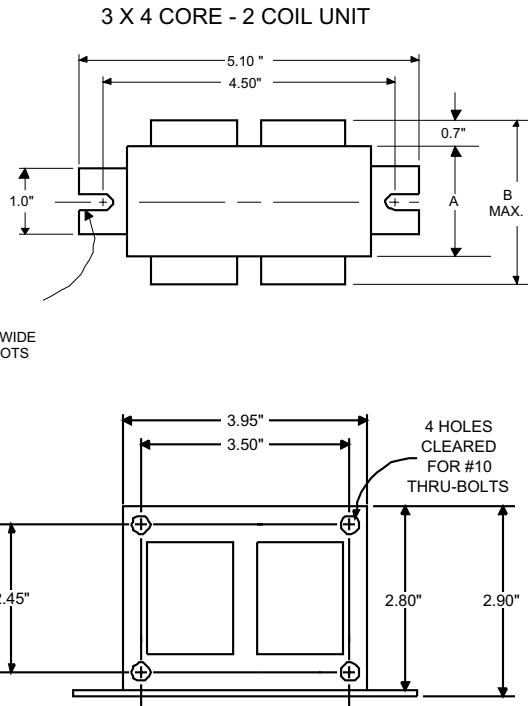
©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. [Privacy policy](#)
[Philips](#). Access to and use of this Web Site is subject to these [Terms of use](#).



Metal Halide Lamp Ballast

Catalog Number 71A50Y1
For 39W M130
60 Hz HX-HPF
Status: Active

DIMENSIONS AND DATA



0.25" WIDE
2 SLOTS

		100	200			
INPUT VOLTS						
CIRCUIT TYPE	HX-HPF					
POWER FACTOR (min)	90%					
REGULATION						
Line Volts	±5%					
Lamp Watts	±10%					
LINE CURRENT (Amps)						
Operating.....		0.56	0.28			
Open Circuit.....		1.30	0.70			
Starting.....		0.50	0.25			
UL TEMPERATURE RATINGS						
Insulation Class	H(180°C)					
Coil Temperature Code	1029	A	A			
MIN. AMBIENT STARTING TEMP.	-30°F or -35°C					
NOM. OPEN CIRCUIT VOLTAGE	248					
INPUT VOLTAGE AT LAMP DROPOUT.....		70	140			
INPUT WATTS	53					
RECOMMENDED FUSE (Amps).....		3	2			
CORE and COIL						
Dimension (A)	0.85					
Dimension (B)	1.95					
Weight (lbs.)	3					
Lead Lengths	12"					
CAPACITOR REQUIREMENT						
Microfarads	10.0					
Volts (min.)	280					
Fault Current Withstand (amps)						
60 Hz TEST PROCEDURES (Refer to Advance Test Procedure for HID Ballasts - Form 1270)						
High Potential Test (Volts)						
1 minute						
2 seconds	1500					
Open Circuit Voltage Test (Volts)	2500					
Short-Circuit Current Test (Amps)	223-273					
Secondary Current						
Input Current.....	0.60-0.74	0.38	0.19	-	-	-
		0.58	0.29			

Capacitor: 7C100M30-R



Capacitance: 10
 Dia/Oval Dim: 1.5
 Height: 2.9
 Temp Rating: 105°C

Wiring Diagram:

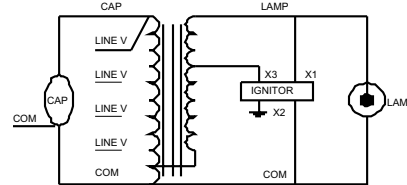


Fig. K

Ignitor: LI533-H4



Ballast to Lamp Distance (BTL) = 5 feet
 Temp Rating: 105°C

Ordering Information

Order Suffix	Description
500D.	Ballast With Ignitor and Dry Film Capacitor

Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice.

ADVANCE TRANSFORMER CO.

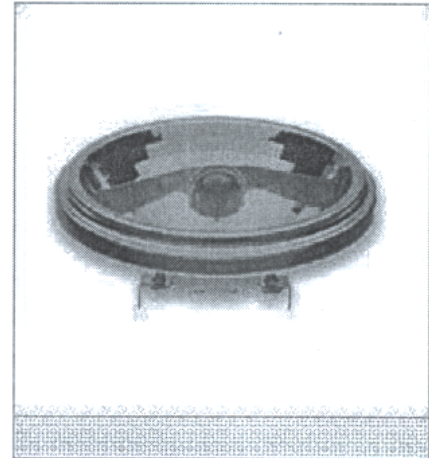
O'HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018
 Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 630-307-3071
 Corporate Offices: Phone: 800-322-2086

04/15/02

PHILIPS

ALU111

Watts	75
Bulb	ALU Pro 111
Base	G53
Product Number	046677-13400-7
Ordering Code	ALU111MM 75W G53 12V 45D
Volts	12
Package Quantity	6
Description	Wide Flood
Class and Filament	C, C-8
M.O.L. (in.)	2 31/64
L.C.L. (in.)	1.18
Rated Avg. Life	3000
Approximate MBCP	1900
Lumens	1575
Approximate Color Temp. (K)	3000
Approximate Beam Spread (Degrees)	45



Images

+ Product Photo

Literature

+ Product Bulletin

Other Information

+ Printable Page

+ Send this Link

+ Bookmark this Page

Information for this product last modified on September 08 2004.

©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. Privacy policy
Philips. Access to and use of this Web Site is subject to these Terms of use.

Master of Architecture



Toronto University Architecture Dept.

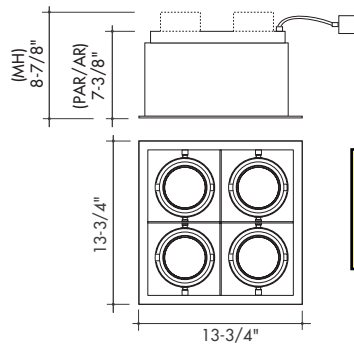
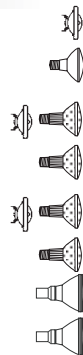




Newtown restaurant, Fofi & Drouin designers

Multiple Large Four

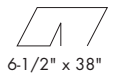
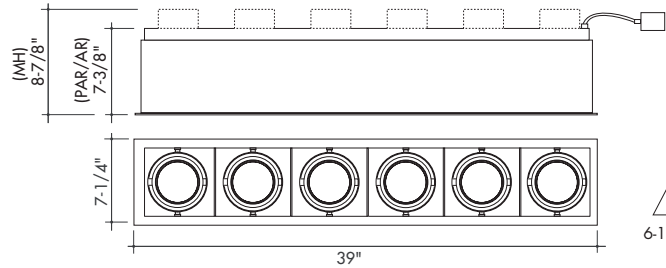
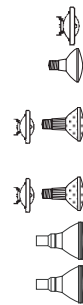
- 8240-AR** 4 x AR 111 75 W
- 8240-PAR** 4 x PAR 30 75 W
- 8240-MH35** 2 x AR 111 75 W +
2 x Metal Halide PAR 30 35 W
- 8240-4MH35** 4 x Metal Halide PAR 30 35 W
- 8240-MH70** 2 x AR 111 75 W +
2 x Metal Halide PAR 30 70 W
- 8240-4MH70** 4 x Metal Halide PAR 30 70 W
- 8340-PAR** 4 x PAR 38 90W
- 8340-MH** 4 x Metal Halide PAR 38 70W



Fixture to be oriented linearly as multiply large six below, but with four lamps.

Multiple Large Six

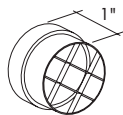
- 8260-AR** 6 x AR 111 75 W
- 8260-PAR** 6 x PAR 30 75 W
- 8260-MH35** 4 x AR 111 75 W +
2 x Metal Halide PAR 30 35 W
- 8260-MH70** 4 x AR 111 75 W +
2 x Metal Halide PAR 30 70 W
- 8360-PAR** 6 x PAR 38 90 W
- 8360-MH** 2 x Metal Halide PAR 38 70W +
4 x PAR 38 90 W



ACCESSORIES FOR MULTIPLE LARGE



- 8211** Cross Baffle for PAR 30
- 8311** Cross Baffle for PAR 38



- 8812** for PAR, AR 111
- 00 frosted
- 05 red
- 06 yellow
- 09 blue
- 24 clear

These are standard configurations.
Custom configurations available upon request.

PHILIPS**Protected MasterColor® Ceramic Metal Halide Lamp**

Feature	PAR Style. Open or Enclosed Luminaires. Lifetime Color Stability Within +/- 200K
Watts	70
Bulb	PAR-30L
Base	Med.
Product Number	046677-23221-5
Ordering Code	CDM70/PAR30L/M/FL
Package Quantity	6
Description	G, PAR WISO Flood 40 degrees FadeBlock 10,000 MBCP
ANSI Code/Ballast Ref.	M143/M98/O
CRI	82
Rated Avg. Life (Hrs.)	9000
M.O.L.	4 3/4
Approximate Initial Lumens	4850
Approximate Mean Lumens	3880
CCT	3000

**Images**

- + [Family Photo](#)
- + [Product Logo](#)
- + [Product Photo](#)

Literature

- + [Family Brochure](#)
- + [MSDS S15-95004](#)
- + [MSDS S15-95005](#)
- + [Photometric Data](#)
- + [Technical Data Sheet](#)

Other Information

- + [Printable Page](#)
- + [View Compatible Ballasts](#)
- + [Send this Link](#)
- + [Bookmark this Page](#)
- † Heat resisting glass bulb

Footnotes

- + ANSI CODE RATING, E - Enclosed, O - Open, S - Open or Enclosed
- + Rated average life is the life obtained, on the average, from large representative groups of lamps in laboratory tests under controlled conditions at 10 or more operating hours per start. It is based on survival of at least 50% of the lamps and allows for individual lamps or groups of lamps to vary considerably from the average. For lamps with a rated average life of 24,000 hours, life is based on survival of 67% of the lamps.
- + Approximate lumen values listed are for vertical operation of the lamp.

- + [Click here for Recommended Warnings, Cautions and Operating Instructions.](#)
- + Approximate lumen output at 40% of lamp rated average life.
- + Requires a ballast specified or approved for Philips Metal Halide lamp or one designed to the indicated ANSI Standard. A pulse ignitor is required. Sockets and wiring must withstand starting pulse.
- + Supply volts must be +/- 5% of rated ballast line volts for reactor type and +/- 10% for CWA or electronic ballasts.
- + UV filtered design (Fade-Block™).
- + **MasterColor®** Metal Halide Lamps are not recommended for use on dimmers and are not warranted if used on dimmer systems.
- + Excellent color rendition - up to 92 CRI
- + Heat resisting glass bulb
- + [Click here for specific product and ordering information on this lamp.](#)

Information for this product last modified on June 22 2004.

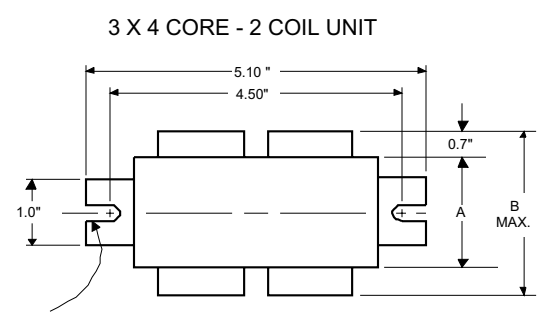
©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. [Privacy policy](#)
[Philips](#). Access to and use of this Web Site is subject to these [Terms of use](#).



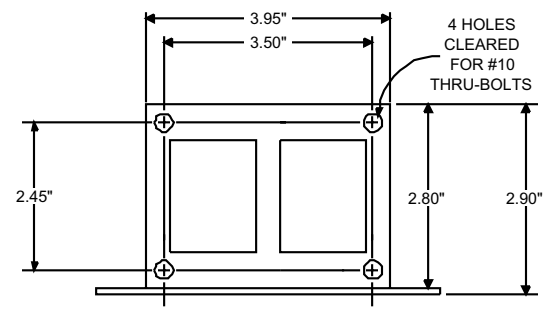
Metal Halide Lamp Ballast

Catalog Number 71A5282
For 70W M98/M143
60 Hz HX-HPF
Status: Active

DIMENSIONS AND DATA



0.25" WIDE
2 SLOTS



INPUT VOLTS	120	277			
CIRCUIT TYPE	HX-HPF				
POWER FACTOR (min)	90%				
REGULATION					
Line Volts	±5%				
Lamp Watts	±7%				
LINE CURRENT (Amps)					
Operating.....	0.80	0.35			
Open Circuit.....	1.90	0.80			
Starting.....	0.55	0.25			
UL TEMPERATURE RATINGS					
Insulation Class	H(180°C)				
Coil Temperature Code	1029				
MIN. AMBIENT STARTING TEMP.	-20°F or -30°C				
NOM. OPEN CIRCUIT VOLTAGE	255				
INPUT VOLTAGE AT LAMP DROPOUT.....	90	208			
INPUT WATTS	88				
RECOMMENDED FUSE (Amps).....	4	2			
CORE and COIL					
Dimension (A)	1.45				
Dimension (B)	2.75				
Weight (lbs.)	5				
Lead Lengths	12"				
CAPACITOR REQUIREMENT					
Microfarads	8.0				
Volts (min.)	280				
Fault Current Withstand (amps)	280				
60 Hz TEST PROCEDURES (Refer to Advance Test Procedure for HID Ballasts - Form 1270)					
High Potential Test (Volts)					
1 minute	2000				
2 seconds	2500				
Open Circuit Voltage Test (Volts)	230-280				
Short-Circuit Current Test (Amps)	230-280				
Secondary Current	0.95-1.25				
Input Current.....	0.55	0.25	-	-	-
	0.80	0.45			

Capacitor: 7C080L33-R



Capacitance: 8
 Dia/Oval Dim: 1.25
 Height: 2.9
 Temp Rating: 105°C

Wiring Diagram:

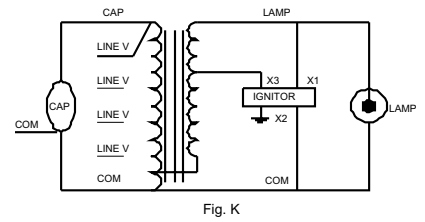


Fig. K

Ignitor: LI533-H4



Ballast to Lamp Distance (BTL) = 15 feet
 Temp Rating: 105°C

Ordering Information

Order Suffix	Description
500D.	Ballast With Ignitor and Dry Film Capacitor
510D.	Ballast w/Welded Bracket, Ignitor, & Dry Film Capacitor
600.	Ballast and Ignitor, No Capacitor
610.	Ballast with Welded Bracket and Ignitor, No Capacitor

Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice.

ADVANCE TRANSFORMER CO.

O'HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018
 Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 630-307-3071
 Corporate Offices: Phone: 800-322-2086

11/08/00

Designed for use in commercial spaces, like shops, restaurants, and displays, the multiple downlights are suitable in all projects where directional lighting is desired.

Available in halogen, metal halide or a combination of both, the multiple is a versatile solution for applications where more than one lamp type is needed.

This new series of multi lamp downlights supports up to six independently directional units.

Optical assemblies are adjustable in virtually all directions. This series are supplied with new construction plaster frame and integral electronic transformers and/or electronic ballasts, 120 volts (277-347 volts upon request).

Relamping is simple and does not require tools.



Directional recessed downlight provides direct light.

Die cast aluminum optical assembly, steel frame, body and fastener.

Uses PAR 30 and PAR 38 halogen, PAR 30, PAR 38 metal halide and AR111 low voltage.

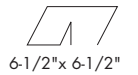
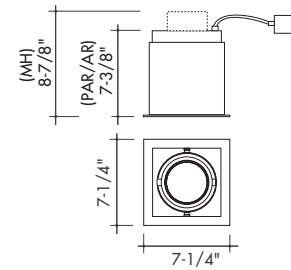
Available in grey.





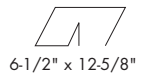
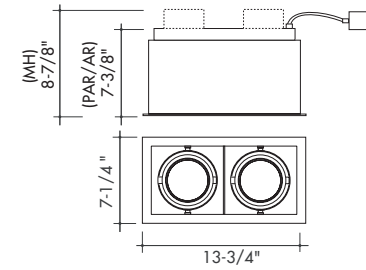
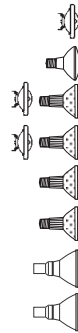
Multiple Large Single

- 8210-AR** 1 x AR 111 75 W
- 8210-PAR** 1 x PAR 30 75 W
- 8210-MH35** 1 x Metal Halide PAR 30 35 W
- 8210-MH70** 1 x Metal Halide PAR 30 70 W
- 8310-PAR** 1 x PAR 38 90W
- 8310-MH** 1 x Metal Halide PAR 38 70W



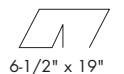
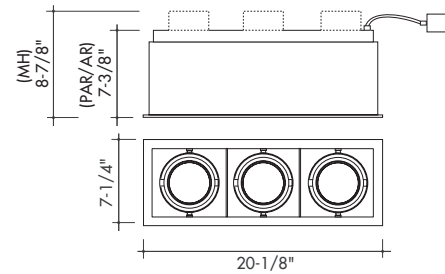
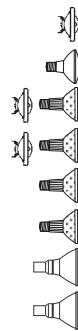
Multiple Large Double

- 8220-AR** 2 x AR 111 75 W
- 8220-PAR** 2 x PAR 30 75 W
- 8220-1MH35** 1 x AR 111 75 W+Metal Halide PAR 30 35 W
- 8220-1MH70** 1 x AR 111 75 W+Metal Halide PAR 30 70 W
- 8220-2MH35** 2 x Metal Halide PAR 30 35 W
- 8220-2MH70** 2 x Metal Halide PAR 30 70 W
- 8320-PAR** 2 x PAR 38 90W
- 8320-MH** 2 x Metal Halide PAR 38 70W



Multiple Large Triple

- 8230-AR** 3 x AR 111 75 W
- 8230-PAR** 3 x PAR 30 75 W
- 8230-1MH35** 2 x AR 111 75 W+Metal Halide PAR 30 35 W
- 8230-1MH70** 2 x AR 111 75 W+Metal Halide PAR 30 70 W
- 8230-3MH35** 3 x Metal Halide PAR 30 35 W
- 8230-3MH70** 3 x Metal Halide PAR 30 70 W
- 8330-PAR** 3 x PAR 38 90W
- 8330-MH** 3 x Metal Halide PAR 38 70W



These are standard configurations. Custom configurations available upon request.

Designed for use in commercial spaces, like shops, restaurants, and displays, the multiple downlights are suitable in all projects where directional lighting is desired.

Available in halogen, metal halide or a combination of both, the multiple is a versatile solution for applications where more than one lamp type is needed.

This new series of multi lamp downlights supports up to six independently directional units.

Optical assemblies are adjustable in virtually all directions. This series are supplied with new construction plaster frame and integral electronic transformers and/or electronic ballasts, 120 volts (277-347 volts upon request).

Relamping is simple and does not require tools.



Directional recessed downlight provides direct light.

Die cast aluminum optical assembly, steel frame, body and fastener.

Uses PAR 30 and PAR 38 halogen, PAR 30, PAR 38 metal halide and AR111 low voltage.

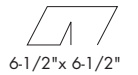
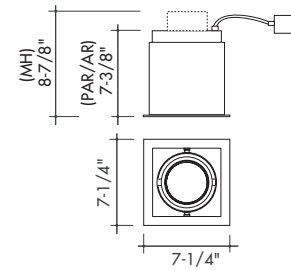
Available in grey.





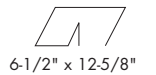
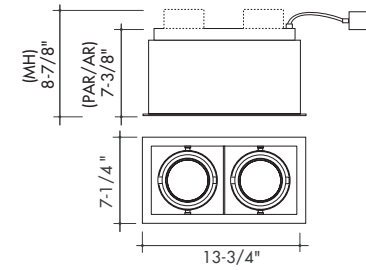
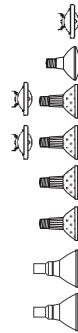
Multiple Large Single

- 8210-AR** 1 x AR 111 75 W
- 8210-PAR** 1 x PAR 30 75 W
- 8210-MH35** 1 x Metal Halide PAR 30 35 W
- 8210-MH70** 1 x Metal Halide PAR 30 70 W
- 8310-PAR** 1 x PAR 38 90W
- 8310-MH** 1 x Metal Halide PAR 38 70W



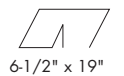
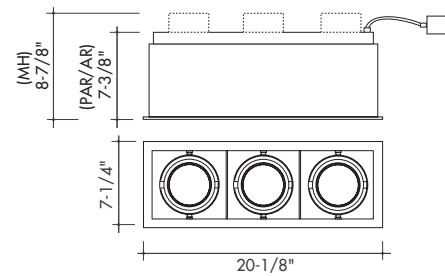
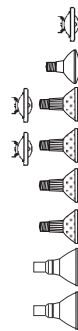
Multiple Large Double

- 8220-AR** 2 x AR 111 75 W
- 8220-PAR** 2 x PAR 30 75 W
- 8220-1MH35** 1 x AR 111 75 W+Metal Halide PAR 30 35 W
- 8220-1MH70** 1 x AR 111 75 W+Metal Halide PAR 30 70 W
- 8220-2MH35** 2 x Metal Halide PAR 30 35 W
- 8220-2MH70** 2 x Metal Halide PAR 30 70 W
- 8320-PAR** 2 x PAR 38 90W
- 8320-MH** 2 x Metal Halide PAR 38 70W

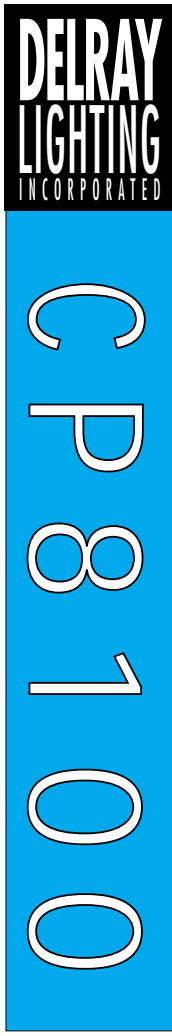


Multiple Large Triple

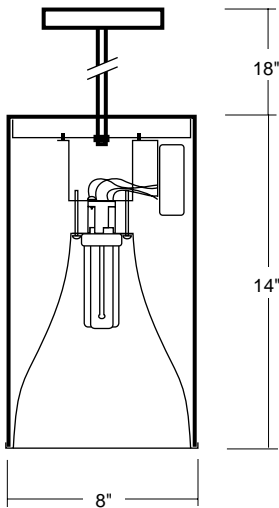
- 8230-AR** 3 x AR 111 75 W
- 8230-PAR** 3 x PAR 30 75 W
- 8230-1MH35** 2 x AR 111 75 W+Metal Halide PAR 30 35 W
- 8230-1MH70** 2 x AR 111 75 W+Metal Halide PAR 30 70 W
- 8230-3MH35** 3 x Metal Halide PAR 30 35 W
- 8230-3MH70** 3 x Metal Halide PAR 30 70 W
- 8330-PAR** 3 x PAR 38 90W
- 8330-MH** 3 x Metal Halide PAR 38 70W



These are standard configurations. Custom configurations available upon request.



8" CYLINDER VERTICAL LAMP DOWNLIGHT



NOTE:
D1, D3, and EM
Accessories
add 4" to height



SPECIFICATION INFORMATION

CYLINDER HOUSING
Pendant mounted cylinder is constructed of seamless extruded aluminum with a powder coat finish. Standard height is 14", dimming and emergency ballast add 4" to height. Fixture mounts to standard junction box. Pendant is 1/8 IPS steel and is standard in 18" (optional length can be specified)

REFLECTOR
Reflector is available in thirty degree cutoff .30. Finishes are **Clear A** or **Gold G Alzak** for anodized, specular, durable and anti-iridescent reflectors.

TRIM OPTIONS
B black baffle
G gold Alzak
SP splay fesnel lens

BALLAST
Electronic enclosed, class P, HPF is supplied standard in 120V or 277V. Ballasts use 4 pin lamps and provide rapid start, .99 power factor with THD<10%. Dimming ballast controls lumen output down to ±5% and is available from Lutron D1 and D4 and Advance D3. All require compatible dimmers.

ELECTRICAL
U.L. listed for use in damp locations.

ACCESSORIES
B black baffle
BA ball aligner canopy
D1 Lutron Hi-Lume dimming ballast adds 4" to length
D3 Advance dimming ballast adds 4" to length
D4 Lutron Tu-Wire dimming ballast 120V only
EM emergency power pack ignites 1 lamp for 90 minutes adds 4" to length
RC retro-fit for existing cylinder (consult factory)
X custom pendant length (specify length)

FINISHES
BM brushed metal
BZ bronze
K black
W white

ORDERING INFORMATION

LAMP
1-18 18 watt triple tube
1-26 26 watt triple tube
1-32 32 watt triple tube
1-42 42 watt triple tube

120V ELECT.
CP8118.1E 18watt triple tube
CP8126.1E 26watt triple tube
CP8132.1E 32watt triple tube
CP8142.1E 42watt triple tube

277V ELECT.
CP8118.2E 18watt triple tube
CP8126.2E 26watt triple tube
CP8132.2E 32watt triple tube
CP8142.2E 42watt triple tube

FINISH MUST BE SPECIFIED

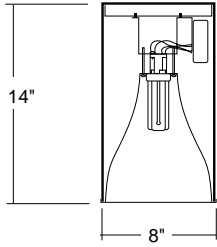
11916
VALERIO ST.
NORTH
HOLLYWOOD,
CALIFORNIA
91605
PHONE
818 982 3701
FAX
818 982 3715

SUBMITTAL INFORMATION

TYPE: PROJECT: NOTES:
DESCRIPTION:

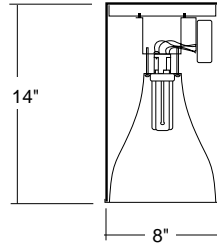
CLEAR ALZAK 30°

CP8118



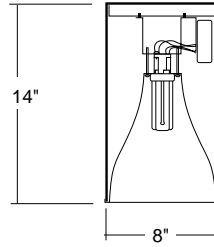
CLEAR ALZAK 30°

CP8126



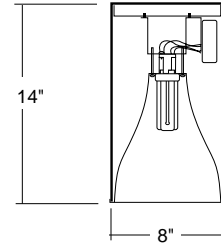
CLEAR ALZAK 30°

CP8132



CLEAR ALZAK 30°

CP8142



CONE OF LIGHT

MTG. HT.	FC/0°	DIA.
4'	65	3.7
6'	29	5.5
8'	17	7.3
10'	11	9.2
12'	8	11.0

50% FC at edge

MTG. HT.	FC/0°	DIA.
4'	81	3.7
6'	39	5.5
8'	19	7.3
10'	12	9.2
12'	9	11.0

50% FC at edge

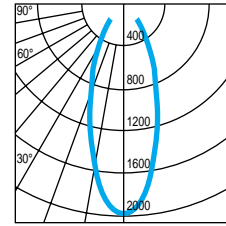
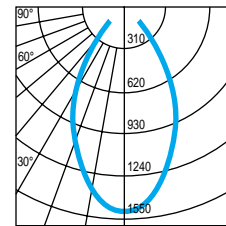
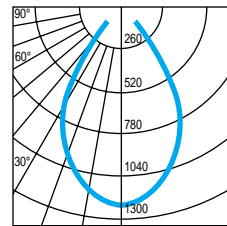
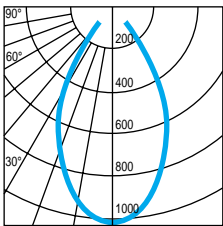
MTG. HT.	FC/0°	DIA.
4'	95	4.2
6'	42	6.4
8'	24	8.5
10'	15	10.7
12'	11	12.8

50% FC at edge

MTG. HT.	FC/0°	DIA.
4'	123	4.3
6'	54	6.6
8'	31	8.8
10'	19	10.9
12'	14	12.9

50% FC at edge

CP DISTRIBUTION



COEFFICIENTS OF UTILIZATION

	% CEILING 80 (20% FLOOR)		
	% WALL 70	50	30
0	75	75	75
1	72	71	70
2	70	67	65
3	67	64	61
4	64	60	58
5	62	57	54
6	59	55	52
7	57	52	49
8	54	49	46
9	52	47	43
10	50	44	41

	% CEILING 80 (20% FLOOR)		
	% WALL 70	50	30
0	71	71	71
1	69	67	66
2	66	63	61
3	63	60	57
4	61	57	54
5	58	53	50
6	55	51	48
7	53	48	45
8	50	45	42
9	48	43	39
10	46	40	37

	% CEILING 80 (20% FLOOR)		
	% WALL 70	50	30
0	84	84	84
1	80	78	77
2	77	74	71
3	73	69	66
4	70	65	62
5	67	61	57
6	63	58	54
7	60	54	50
8	57	50	46
9	54	47	43
10	51	44	40

	% CEILING 80 (20% FLOOR)		
	% WALL 70	50	30
0	79	79	79
1	76	74	73
2	73	70	67
3	69	66	63
4	66	62	58
5	63	58	55
6	60	55	51
7	57	51	48
8	54	48	44
9	51	45	41
10	49	42	39

NOTES

CP8118
1-18 watt triple tube
G24q-2 electronic socket
Total lumens-1250
Spacing criteria-.9
Gold Alzak x.90

CP8126
1-26 watt triple tube
G24q-3 electronic socket
Total lumens-1800
Spacing criteria-.9
Gold Alzak x.90

CP8132
1-32 watt triple tube
G24q-3 electronic socket
Total lumens-2400
Spacing criteria-.9
Gold Alzak x.90

CP8142
1-42 watt triple tube
G24q-4 electronic socket
Total lumens-3200
Spacing criteria-.9
Gold Alzak x.90



PL-T Triple 4-Pin Fluorescent Lamp

Feature	High color rendering, high efficacy lamps feature 4-pin base for use with preheat, rapid start, electronic and dimming circuits. Featuring ALTO [®] Lamp Technology
Watts	32
Bulb	PL-T
Base	GX24q-3
Product Number	046677-26832-6
Ordering Code	PL-T 32W/830/4P/ALTO
Generic Designation	CFTR32W/GX24q/830
Package Quantity	12
Description	3000K
CRI	82
Avg. Hrs. Life	10,000
Design Lumens	2040
M.O.L.	5 5/8
Lumens	2400



Images

- + [ALTO Product Logo](#)
- + [Family Photo](#)
- + [Product Photo](#)

Literature

- + [ALTO Family Brochure](#)
- + [MSDS S08-98001](#)

Other Information

- Energy Saving Product
- + [Printable Page](#)
- + [View Compatible Ballasts](#)
- + [Send this Link](#)
- + [Bookmark this Page](#)

Footnotes

- + This Product Contains Amalgam
- + High Color Rendering Lamp
- + Features **ALTO**[®] Lamp Technology
- + Rated average life under specified test conditions with Programmed Start ballasts with lamps turned off and restarted no more frequently than once every 3 operating hours. Lamp life is appreciably longer if lamps are started less frequently.

+ Approximate Initial Lumens. The lamp lumen output is based upon lamp performance after 100 hours of operating life, when the output is measured during operation on a reference ballast under standard laboratory conditions.

+ Design Lumens are the approximate lamp lumen output at 40% of the lamp's Rated Average Life. This output is based upon measurements obtained during lamp operation on a reference ballast under standard laboratory conditions.

Information for this product last modified on September 25, 2001

©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. [Privacy policy](#)
[Philips](#). Access to and use of this Web Site is subject to these [Terms of use](#).

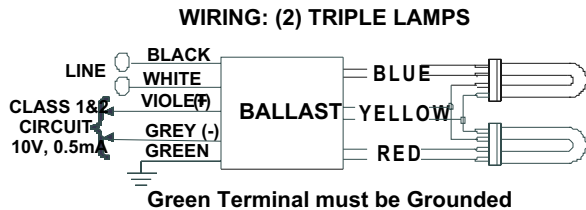


IZT-2T42-M3-BS@120	
Brand Name	MARK VII 0-10V
Ballast Type	Electronic Dimming
Starting Method	Programmed Start
Lamp Connection	Series
Input Voltage	120-277
Input Frequency	50/60 HZ
Status	Active

Electrical Specifications

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Input Power (Watts) (min/max)	Ballast Factor (min/max)	MAX THD %	Power Factor	Lamp Current Crest Factor	B.E.F.
* CFM32W/GX24Q	2	32	50/10	0.63	19/75	0.05/1.00	10	0.99	1.4	1.33
CFM42W/GX24Q	2	42	50/10	0.82	18/98	0.05/1.00	10	0.99	1.4	1.02
CFTR57W/GX24Q	1	57	50/10	0.55	18/66	0.05/1.00	10	0.99	1.7	1.52
CFTR70W/GX24Q	1	70	50/10	0.67	18/80	0.05/1.00	10	0.99	1.7	1.25

Wiring Diagram

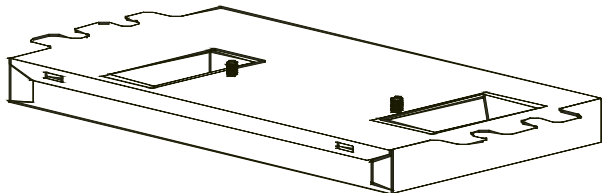


The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.		in.	cm.
Black	0	0	Yellow/Blue		0
White	0	0	Blue/White		0
Blue	0	0	Brown		0
Red	0	0	Orange		0
Yellow	0	0	Orange/Black		0
Gray	0	0	Black/White		0
Violet	0	0	Red/White		0

Enclosure



Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
6.28 "	3.00 "	1.29 "	2.00 "
6 7/25	3	1 29/100	2
16 cm	7.6 cm	3.3 cm	5.1 cm

Revised 08/27/2003



Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

ADVANCE TRANSFORMER CO.

O'HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018
 Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 630-307-3071
 Corporate Offices: Phone: 800-322-2086



IZT-2T42-M3-BS@120	
Brand Name	MARK VII 0-10V
Ballast Type	Electronic Dimming
Starting Method	Programmed Start
Lamp Connection	Series
Input Voltage	120-277
Input Frequency	50/60 HZ
Status	Active

Electrical Specifications

Notes:

Section I - Physical Characteristics

- 1.1 Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.
- 1.2 Ballast shall be available in a plastic/metal can or all metal can construction to meet all plenum requirements.
- 1.3 Ballast shall be provided with poke-in wire trap connectors or integral leads color coded per ANSI C82.11.

Section II - Performance Requirements

- 2.1 Ballast shall be Programmed Start.
- 2.2 Ballast shall be provided with integral protection circuitry to withstand connection of low voltage control leads to mains power supply. In this event, ballast shall default to maximum light output.
- 2.3 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.4 Ballast shall operate from 50/60 Hz input source of 120V or 277V with sustained variations of +/- 10% (voltage and frequency) with no damage to the ballast. IntelliVolt models shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency) with no damage to the ballast.
- 2.5 Ballast shall be high frequency electronic type and operate lamps at a frequency above 42 kHz to avoid interference with infrared devices and eliminate visible flicker.
- 2.6 Ballast shall have a Power Factor greater than 0.98 at full light output and greater than 0.90 throughout the dimming range for primary lamp.
- 2.7 Ballast shall have a maximum ballast factor of 1.00 (1.18 for HL versions) at maximum light output and 0.03 at minimum light output for primary lamp application.
- 2.8 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less throughout the dimming range in accordance with lamp manufacturer recommendations.
- 2.9 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage with primary lamp.
- 2.10 Ballast shall have a Class A sound rating.
- 2.11 Ballast shall have a minimum starting temperature of 10C (50F) for primary lamp.
- 2.12 Ballast shall provide Lamp EOL Protection Circuit for all T5, T5/HO, CFL lamps, and T8 lamps operating on 4-lamp ballast.
- 2.13 Ballast shall control lamp light output from 100% - 3% relative light output for T8 and CFL lamps and 100% - 1% relative light output for T5/HO lamps.
- 2.14 Ballast shall ignite the lamps at any light output setting without first going to another output setting.
- 2.15 Ballast shall tolerate sustained open circuit and short circuit output conditions without damage.

Section III - Regulatory Requirements

- 3.1 Ballast shall not contain any Polychlorinated Biphenyl (PCB).
- 3.2 Ballast shall be Underwriters Laboratories (UL) listed, Class P and Type 1 Outdoor; and Canadian Standards Association (CSA) certified where applicable.
- 3.3 Ballast shall comply with ANSI C62.41 Category A for Transient protection.
- 3.4 Ballast shall comply with ANSI C82.11 where applicable.
- 3.5 Ballast shall comply with the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated).

Section IV - Other

- 4.1 Ballast shall be manufactured in a factory certified to ISO 9002 Quality System Standards.
- 4.2 Ballast shall carry a five-year warranty from date of manufacture against defects in material or workmanship, including replacement, for operation at a maximum case temperature of 70C.

4.3 Manufacturer shall have a fifteen-year history of producing electronic ballasts for the North American market.

4.4 Ballast shall be controlled by a Class 1 or Class 2 low voltage 0-10VDC controller.

4.5 Ballast shall be Advance Transformer part # _____ or approved equal.

Revised 08/27/2003



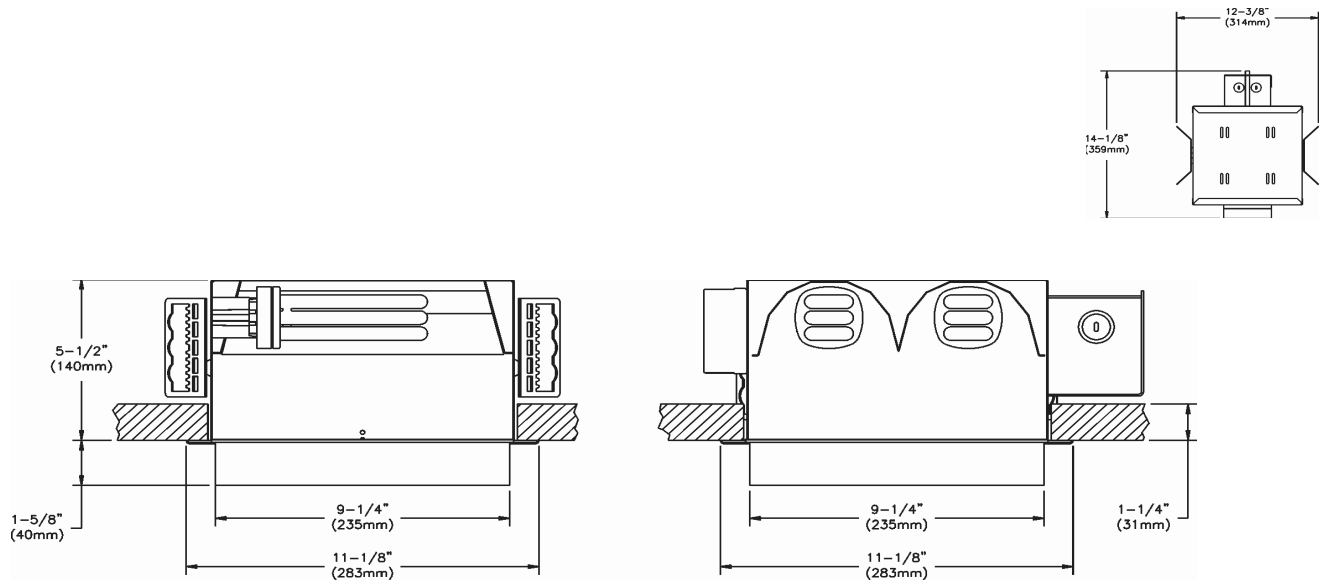
Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

ADVANCE TRANSFORMER CO.
O'HARE INTERNATIONAL CENTER - 10275 WEST HIGGINS ROAD
ROSEMONT, ILLINOIS 60018
TELEPHONE: (847) 390-5000 FAX: (847) 390-5109

9" x 9" Floating Paper
Optic Forms
2-26/32/42W Triple Twin Tube

Spectral
Architectural Lighting

SL207C



Ceiling Cutout : 9 5/8" (245mm) X 9 5/8" (245mm)

Ordering Guide (complete unit only)

Cat. No.	Lamp (Triple Twin Tube)	Volts	Finish
SL207CTEU	2-26/32/42W TTT	120/277V	Clear acrylic with white lacquer lens and brushed stainless steel square trim. Stainless steel screws .
SL207CTE3		347V	
SL207CPPU	2-26W TTT	120/277V (HDF)	
SL207CPOU	2-32/42W TTT	120/277V (HDF)	
SL207CTZ1	2-26W TTT	120V (MARK-10)	
SL207CTZ2		277V (MARK-10)	
SL207CTR1	2-32/42W TTT	120V (MARK-10)	
SL207CTR2		277V (MARK-10)	

Features

- Lens** : 40mm thick clear acrylic finished with a translucent diffused coating.
- Trim Ring** : 18 ga. Steel. Brushed Stainless finish.
- Upper Reflector**: High efficiency, 97%, Specular Clear.
- Housing**: 20ga. Galvanized formed steel. Centerline notches and holes for consistent alignment of multiple fixtures. Accommodates ceilings up to 1 1/4" (31mm) thick.
- Ballast Assembly**: Door-mounted for easy service, allows replacement from inside of fixture.
- Junction Box**: 14 ga. Galvanized steel. Accessible from inside and outside of the fixture. Outside J-box door is hinged for easy access.
- Mounting Brackets**: 16 ga. steel. Use 18" (457 mm) mounting bars (optional) or with standard 3/4" (19 mm), 1-1/2" (38 mm) lathing channels (by others) or 1/2" (13 mm) tubing (by others). Adjust vertically from inside of fixture.
- Junction Box**: CSA certified for through branch circuit wiring with maximum of 8 no. 12, 90° C conductors.

Mounting

Recessed, Non-IC Type (non thermal insulation contact).

Electrical

Ballast : Electronic Program Rapid Start T4 quad lamp ballast. Universal voltage "U" ballast automatically detect 120 volts or 277 volts operation. No visible flicker on starting, internally fused and protection circuit for lamp end of life. Sound rated "A". Designed for removal without tools from inside of luminaire for easy field inspection or service replacement.

TE : 26/32/42W TTT non-dimming

PP : 26W TTT HDF dimming

PO : 32/42W TTT HDF dimming

TZ : 26W TTT MARK-10 dimming

TR : 32/42W TTT MARK-10 dimming

Lampholder : 26/32W : G24q-3 base, 42W : G24q-4 (4-pins)

Options and Accessories

Mounting bars: **1950** (set of 2) 18" (457 mm) long. **1951** (set of 2) 30" (762 mm) long.

T-Bar Anchor Clips : **1956** (set of 4) For anchoring mounting bars to T-Bar runners.

Finish

Lens : Clear acrylic with white lacquer

Square Trim : Brushed Stainless steel

Labels

UL "c/us" Listed. Suitable for wet locations.

WE RESERVE THE RIGHT TO CHANGE DETAILS OF DESIGN, MATERIALS AND FINISH, IN ANY WAY THAT WILL NOT ALTER INSTALLED APPEARANCE OR REDUCE FUNCTION AND PERFORMANCE.

Lightolier Canada, 3015 Louis Amos Lachine, (Quebec) H8T 1C4

Floating Paper 9" x 9"
 Optic Forms
 2-26/32/42W Triple Twin Tube

Spectral
 Architectural Lighting

SL207C



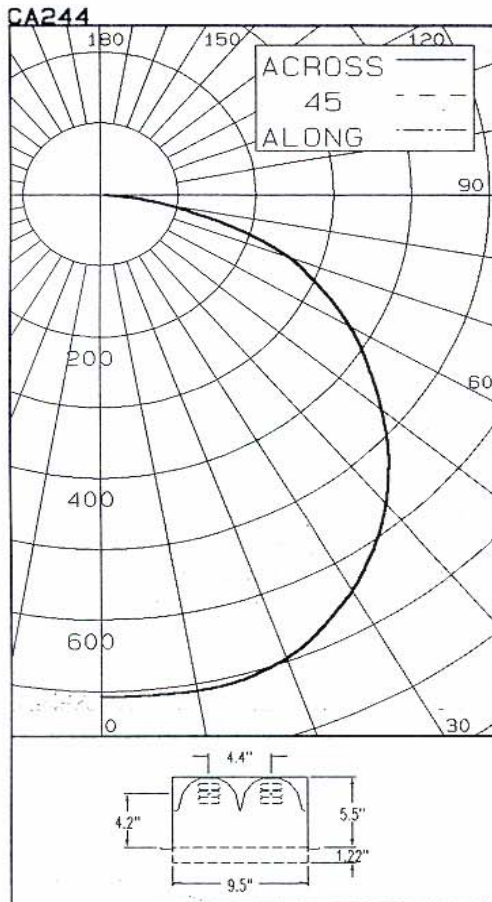
LIGHTING SCIENCES CANADA LTD.

440 Phillip St., Unit 19, Waterloo, Ontario, Canada N2L 5R9
 Tel: (519) 746-3140 Fax: (519) 746-3156 lsc@ionline.net

CERTIFIED TEST REPORT NO. LSCA244
 COMPUTED BY LSC PROGRAM **TEST-LITE**

LIGHTOLIER-CFI RECESSED LUMINAIRE CAT. NO. SL207C
 WITH 9x9 SQUARE APERTURE AND FROSTED GLASS LENS
 TWO 42W PL-T COMPACT FLUORESCENT LAMPS. LUMEN RATING = 3200 LMS.
 ONE ADVANCE 120-277V 2-LAMP ELECTRONIC BALLAST NO. ICF-2S42-M2-BS

CANDLEPOWER SUMMARY



ANGLE	MEAN CP	LUMENS
0	707	
5	708	69
10	709	
15	707	199
20	695	
25	673	310
30	645	
35	609	381
40	569	
45	523	402
50	471	
55	420	376
60	370	
65	315	312
70	258	
75	177	185
80	94	
85	42	48
90	6	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	577	9.03	25.32
0-40	958	14.97	42.01
0-60	1736	27.13	76.10
0-90	2281	35.64	100.00
40-90	1322	20.67	57.99
60-90	545	8.52	23.90
90-180	0	.00	.00
0-180	2281	35.64	100.00

** EFFICIENCY = 35.6% **

LUMINANCE SUMMARY-CD. / SQ. M.

S/MH = 1.3
 SC = 1.3

ANGLE	MEAN CD/SQ M
45	11455
55	10865
65	10365
75	8305
85	3615

CERTIFIED BY:

Charles Sisson

DATE:
 APR 8, 2004

PREPARED FOR:

LIGHTOLIER-CFI
 LACHINE, QUEBEC

TESTED ACCORDING TO IES PROCEDURES. TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST LUMINOUS OPENING OF LUMINAIRE.

LIGHTOLIER®



PL-T Triple 4-Pin Fluorescent Lamp

Feature	High color rendering, high efficacy lamps feature 4-pin base for use with preheat, rapid start, electronic and dimming circuits. Featuring ALTO [®] Lamp Technology
Watts	32
Bulb	PL-T
Base	GX24q-3
Product Number	046677-26832-6
Ordering Code	PL-T 32W/830/4P/ALTO
Generic Designation	CFTR32W/GX24q/830
Package Quantity	12
Description	3000K
CRI	82
Avg. Hrs. Life	10,000
Design Lumens	2040
M.O.L.	5 5/8
Lumens	2400



Images

- + [ALTO Product Logo](#)
- + [Family Photo](#)
- + [Product Photo](#)

Literature

- + [ALTO Family Brochure](#)
- + [MSDS S08-98001](#)

Other Information

- Energy Saving Product
- + [Printable Page](#)
- + [View Compatible Ballasts](#)
- + [Send this Link](#)
- + [Bookmark this Page](#)

Footnotes

- + This Product Contains Amalgam
- + High Color Rendering Lamp
- + Features **ALTO**[®] Lamp Technology
- + Rated average life under specified test conditions with Programmed Start ballasts with lamps turned off and restarted no more frequently than once every 3 operating hours. Lamp life is appreciably longer if lamps are started less frequently.

+ Approximate Initial Lumens. The lamp lumen output is based upon lamp performance after 100 hours of operating life, when the output is measured during operation on a reference ballast under standard laboratory conditions.

+ Design Lumens are the approximate lamp lumen output at 40% of the lamp's Rated Average Life. This output is based upon measurements obtained during lamp operation on a reference ballast under standard laboratory conditions.

Information for this product last modified on September 25, 2001

©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. [Privacy policy](#)
[Philips](#). Access to and use of this Web Site is subject to these [Terms of use](#).



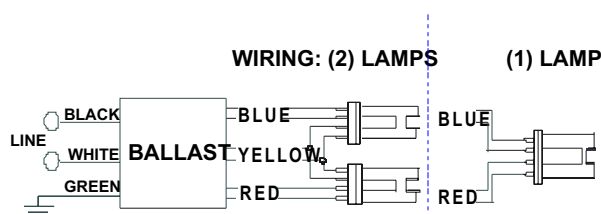
ICF-2S42-M2-BS@120

Brand Name	SMARTMATE
Ballast Type	Electronic
Starting Method	Programmed Start
Lamp Connection	Series
Input Voltage	120-277
Input Frequency	50/60 HZ
Status	Active

Electrical Specifications

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Input Power (ANSI Watts)	Ballast Factor	MAX THD %	Power Factor	MAX Lamp Current Crest Factor	B.E.F.
(1) FC9T5 & (1) FC12T5	2	62	0/-18	0.51	61	0.85	10	0.98	1.5	1.39
CFM26W/GX24Q	2	26	0/-18	0.46	55	1.00	10	0.98	1.5	1.82
* CFM32W/GX24q	2	32	0/-18	0.57	68	0.98	10	0.98	1.5	1.44
CFM42W/GX24q	2	42	0/-18	0.78	93	0.97	10	0.99	1.5	1.04
CFM57W/GX24Q	1	57	32/00	0.50	59	0.94	10	0.98	1.5	1.59
CFM70W/GX24Q	1	70	14/-10	0.63	75	0.96	10	0.98	1.6	1.28
CFQ26W/G24q	2	26	0/-18	0.43	52	1.00	10	0.98	1.5	1.92
CFS28W/GR10q	2	28	0/-18	0.48	57	1.00	10	0.98	1.5	1.75
CFS38W/GR10q	2	38	0/-18	0.55	62	0.80	10	0.98	1.5	1.29
FT24W/2G11	2	24	0/-18	0.40	48	0.93	15	0.98	1.5	1.94
FT40W/2G11/RS	2	40	0/-18	0.66	78	0.95	10	0.99	1.5	1.22

Wiring Diagram

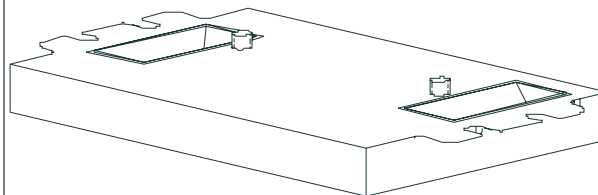


The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.		in.	cm.
Black	0.0		Yellow/Blue		
White	0.0		Blue/White		
Blue	0.0		Brown		
Red	0.0		Orange		
Yellow	0		Orange/Black		
Gray			Black/White		
Violet			Red/White		

Enclosure



Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
4.98 "	3.00 "	1.29 "	2.00 "
4 49/50	3	1 29/100	2
12.6 cm	7.6 cm	3.3 cm	5.1 cm

Revised 09/02/2004



Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

ADVANCE TRANSFORMER CO.

O'HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018
 Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 630-307-3071
 Corporate Offices: Phone: 800-322-2086



ICF-2S42-M2-BS@120	
Brand Name	SMARTMATE
Ballast Type	Electronic
Starting Method	Programmed Start
Lamp Connection	Series
Input Voltage	120-277
Input Frequency	50/60 HZ
Status	Active

Electrical Specifications

Notes:

Section I - Physical Characteristics

- 1.1 Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.
- 1.2 Ballast shall be available in a plastic/metal can or all metal can construction to meet all plenum requirements.
- 1.3 Ballast shall be provided with poke-in wire trap connectors color coded per ANSI C82.11.

Section II - Performance Requirements

- 2.1 Ballast shall be Programmed Start except for ballasts with -QS suffix, which shall be Rapid Start.
- 2.2 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.3 Ballast shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency) with no damage to the IntelliVolt ballast. RCF models shall operate from 60 Hz input source of 120V with sustained variations of +/- 10% (voltage and frequency) with no damage to the ballast.
- 2.4 Ballast shall be high frequency electronic type and operate lamps at a frequency above 42 kHz to avoid interference with infrared devices and eliminate visible flicker.
- 2.5 Ballast shall have a Power Factor greater than 0.98 for primary lamp.
- 2.6 Ballast shall have a minimum ballast factor of 1.00 for primary lamp application.
- 2.7 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less in accordance with lamp manufacturer recommendations.
- 2.8 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage with primary lamp.
- 2.9 Ballast shall have a Class A sound rating.
- 2.10 Ballast shall have a minimum starting temperature of -18C (0F) for primary lamp. Ballasts for PL-H lamps shall have a minimum starting temperature of -30C (-20F) for primary lamp.
- 2.11 Ballast shall provide Lamp EOL Protection Circuit which meets NEMA recommendations.
- 2.12 Ballast shall tolerate sustained open circuit and short circuit output conditions without damage.

Section III - Regulatory Requirements

- 3.1 Ballast shall not contain any Polychlorinated Biphenyl (PCB).
- 3.2 Ballast shall be Underwriters Laboratories (UL) listed, Class P and Type 1 Outdoor; and Canadian Standards Association (CSA) certified where applicable.
- 3.3 Ballast shall be Underwriters Laboratories (UL) rated for use in air-handling spaces.
- 3.4 Ballast shall comply with ANSI C62.41 Category A for Transient protection.
- 3.5 Ballast shall comply with ANSI C82.11 where applicable.
- 3.6 Ballast shall comply with the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated) except for RCF models which shall be Consumer (Class B).

Section IV - Other

- 4.1 Ballast shall be manufactured in a factory certified to ISO 9002 Quality System Standards.
- 4.2 Ballast shall carry a five-year warranty from date of manufacture against defects in material or workmanship, including replacement, for operation at a maximum case temperature of 75C and three-years for a maximum case temperature of 85C (90C 3year warranty for ICF1H120-XX-XX, ICF2S70-XX-XX and ICF2S4290C-XX-XX models).
- 4.3 Manufacturer shall have a fifteen-year history of producing electronic ballasts for the North American market.
- 4.4 Ballast shall be Advance Transformer part # _____ or approved equal.

Revised 09/02/2004



Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

ADVANCE TRANSFORMER CO.
O'HARE INTERNATIONAL CENTER - 10275 WEST HIGGINS ROAD
ROSEMONT, ILLINOIS 60018
TELEPHONE: (847) 390-5000 FAX: (847) 390-5109

FEATURES

OPTICAL SYSTEM

- Internal housing components painted matte black. Lamp snoot minimizes stray light in housing.
- Finishing trim is microgroove black baffle with white painted flange or specular, semi-diffuse or highly specular cone with flange that matches cone finish. White painted flange optional.
- Optical system retained by self-aligning butterfly support springs.
- Accommodates up to two lenses, filters or louvers.
- Softening lens standard (supplied).

MECHANICAL SYSTEM

- Black painted housing features tool-less top access and accommodates a maximum 2" ceiling thickness.
- Re-lamp capability from above or below ceiling.
- Mounting bars are 16-gauge galvanized steel with continuous 4" vertical adjustment, held in place with tool-less, integral cam-action locking. Post installation adjustment possible without the use of tools from above or below the ceiling. Shipped pre-installed.
- Secondary housing adjustment system for precise, final flange to ceiling alignment.
- Painted steel junction box with bottom-hinged access covers and spring latches. Four combination 1/2"-3/4" knockouts for straight-through conduit runs. Capacity: 8(4 in, 4 out) No. 12 AWG conductors, rated for 90°C.

ELECTRICAL SYSTEM

- Tool-less access door provides access to junction box through the aperture.
- Replaceable socket assembly. MR16 socket assembly standard (20W - 75W).
- Magnetic step-down transformer (replaceable without the use of tools).
- Thermally-activated insulation detector (replaceable without the use of tools).

LISTING

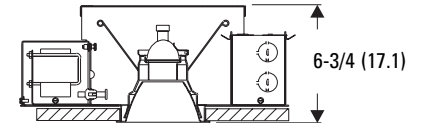
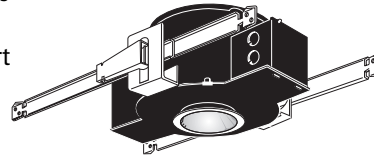
- Fixtures are UL listed for thru-branch wiring, recessed mounting and damp locations. Listed and labeled to comply with Canadian Standards.

Type	Catalog number
.....
.....

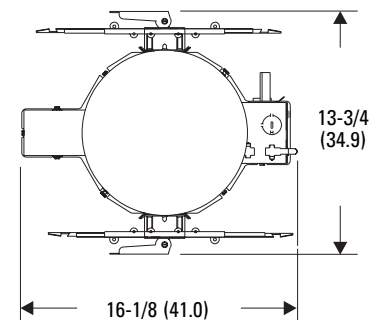
Low Voltage Downlights

4" DLV

Downlight Open Cone



Aperture:	4-5/16 (11.0)
Ceiling opening:	4-7/8 (12.4)
Overlap trim:	5-7/16 (13.8)



All dimensions are inches (centimeters).

ORDERING INFORMATION

Example: DLVDWN MR16 4AC 120

Choose the boldface catalog nomenclature that best suits your needs and write it on the appropriate line. Order accessories as separate catalog numbers (shipped separately).

DLV	DWN	Lamp designation		Cone/Color	Finish	Volt	Options
Series		MR16	MR16 capability (Standard)	4BC ² Black	(blank) Specular low iridescent	120	TRW White painted flange. (Standard with WC, MB, and WB.)
		MR11	MR11 capability	4AC Clear	LD Semi-diffuse low iridescent	277	LRC ³ Provides compatibility with Lithonia Reloc System.
Configuration		ALR12	ALR12 capability	4PC Pewter	LS Highly specular	347	
		ALR18	ALR18 capability	4WTC Wheat			
		AR70 ¹	AR70 capability	4UBC Umber			
				4GC Gold			
				4CC Champagne gold			
				4WC ² White			
				4MB ² Contoured black baffle			
				4WB ² Contoured white baffle			

NOTES

- 1 Clear safety lens standard with AR70 lamp designation.
- 2 Not available with finishes.
- 3 For compatible Reloc systems, refer to options and accessories tab.

Accessories

- For lens accessories, refer to options and accessories tab.
- For lamp options, refer to options and accessories tab.

4" DLV Downlight, Gotham Series

Distribution curve	Distribution data	Output data	Coefficient of utilization	Single luminaire data 30" above floor																																																																																																																																							
DLV DWN MR16 4AC, Q50MR16/C/NSP15 (EXT) lamp, 0.3 s/mh, 880 rated lumens, test no. 2198043004																																																																																																																																											
	From 0°	cp. Lumens	Zone Lumens %lamp	<table border="1"> <thead> <tr> <th rowspan="2">pf</th> <th rowspan="2">pc</th> <th colspan="2">80%</th> <th colspan="2">20%</th> <th colspan="2">50%</th> </tr> <tr> <th>50%</th> <th>30%</th> <th>50%</th> <th>30%</th> <th>50%</th> <th>30%</th> </tr> </thead> <tbody> <tr><td>1</td><td>84</td><td>82</td><td>82</td><td>81</td><td>79</td><td>78</td><td></td></tr> <tr><td>2</td><td>80</td><td>78</td><td>79</td><td>77</td><td>76</td><td>75</td><td></td></tr> <tr><td>3</td><td>77</td><td>74</td><td>76</td><td>73</td><td>74</td><td>72</td><td></td></tr> <tr><td>4</td><td>74</td><td>71</td><td>73</td><td>71</td><td>72</td><td>70</td><td></td></tr> <tr><td>5</td><td>72</td><td>69</td><td>71</td><td>68</td><td>70</td><td>68</td><td></td></tr> <tr><td>6</td><td>70</td><td>67</td><td>69</td><td>66</td><td>68</td><td>66</td><td></td></tr> <tr><td>7</td><td>68</td><td>65</td><td>67</td><td>65</td><td>67</td><td>64</td><td></td></tr> <tr><td>8</td><td>66</td><td>63</td><td>66</td><td>63</td><td>65</td><td>63</td><td></td></tr> <tr><td>9</td><td>65</td><td>62</td><td>64</td><td>62</td><td>64</td><td>61</td><td></td></tr> <tr><td>10</td><td>63</td><td>61</td><td>63</td><td>60</td><td>63</td><td>60</td><td></td></tr> </tbody> </table>	pf	pc	80%		20%		50%		50%	30%	50%	30%	50%	30%	1	84	82	82	81	79	78		2	80	78	79	77	76	75		3	77	74	76	73	74	72		4	74	71	73	71	72	70		5	72	69	71	68	70	68		6	70	67	69	66	68	66		7	68	65	67	65	67	64		8	66	63	66	63	65	63		9	65	62	64	62	64	61		10	63	61	63	60	63	60		<table border="1"> <thead> <tr> <th rowspan="2">Mount height</th> <th rowspan="2">Initial fc at beam center</th> <th colspan="2">50% beam angle 15.6°</th> <th colspan="2">10% beam angle 35.1°</th> </tr> <tr> <th>Beam diameter</th> <th>fc at beam edge</th> <th>Beam diameter</th> <th>fc at beam edge</th> </tr> </thead> <tbody> <tr><td>8'</td><td>174.0</td><td>1.5'</td><td>87.0</td><td>3.5'</td><td>17.4</td></tr> <tr><td>10'</td><td>93.6</td><td>2.1'</td><td>46.8</td><td>4.8'</td><td>9.4</td></tr> <tr><td>12'</td><td>58.3</td><td>2.6'</td><td>29.2</td><td>6.0'</td><td>5.8</td></tr> <tr><td>14'</td><td>39.8</td><td>3.2'</td><td>19.9</td><td>7.3'</td><td>4.0</td></tr> <tr><td>16'</td><td>28.9</td><td>3.7'</td><td>14.4</td><td>8.6'</td><td>2.9</td></tr> </tbody> </table>	Mount height	Initial fc at beam center	50% beam angle 15.6°		10% beam angle 35.1°		Beam diameter	fc at beam edge	Beam diameter	fc at beam edge	8'	174.0	1.5'	87.0	3.5'	17.4	10'	93.6	2.1'	46.8	4.8'	9.4	12'	58.3	2.6'	29.2	6.0'	5.8	14'	39.8	3.2'	19.9	7.3'	4.0	16'	28.9	3.7'	14.4	8.6'	2.9
	pf	pc	80%				20%		50%																																																																																																																																		
			50%	30%	50%	30%	50%	30%																																																																																																																																			
	1	84	82	82	81	79	78																																																																																																																																				
	2	80	78	79	77	76	75																																																																																																																																				
	3	77	74	76	73	74	72																																																																																																																																				
	4	74	71	73	71	72	70																																																																																																																																				
	5	72	69	71	68	70	68																																																																																																																																				
	6	70	67	69	66	68	66																																																																																																																																				
	7	68	65	67	65	67	64																																																																																																																																				
	8	66	63	66	63	65	63																																																																																																																																				
9	65	62	64	62	64	61																																																																																																																																					
10	63	61	63	60	63	60																																																																																																																																					
Mount height	Initial fc at beam center	50% beam angle 15.6°		10% beam angle 35.1°																																																																																																																																							
		Beam diameter	fc at beam edge	Beam diameter	fc at beam edge																																																																																																																																						
8'	174.0	1.5'	87.0	3.5'	17.4																																																																																																																																						
10'	93.6	2.1'	46.8	4.8'	9.4																																																																																																																																						
12'	58.3	2.6'	29.2	6.0'	5.8																																																																																																																																						
14'	39.8	3.2'	19.9	7.3'	4.0																																																																																																																																						
16'	28.9	3.7'	14.4	8.6'	2.9																																																																																																																																						
0°	0°	5263	0°-30°	622	70.7																																																																																																																																						
5°	5°	3805	0°-40°	630	71.6																																																																																																																																						
15°	15°	936	0°-60°	637	72.4																																																																																																																																						
25°	25°	114	0°-90°	654	74.3																																																																																																																																						
35°	35°	12	90°-180°	0	0.0																																																																																																																																						
45°	45°	3	0°-180°	654	74.3*																																																																																																																																						
55°	55°	4	* Efficiency																																																																																																																																								
65°	65°	8																																																																																																																																									
75°	75°	5																																																																																																																																									
85°	85°	3																																																																																																																																									
90°	90°	0																																																																																																																																									

Distribution curve	Distribution data	Output data	Coefficient of utilization	Single luminaire data 30" above floor																																																																																																																																							
DLV DWN MR16 4AC, 65MR16Q/10/NSP (FPA) lamp, 0.3 s/mh, 1100 rated lumens, test no. 2198040602																																																																																																																																											
	From 0°	cp. Lumens	Zone Lumens %lamp	<table border="1"> <thead> <tr> <th rowspan="2">pf</th> <th rowspan="2">pc</th> <th colspan="2">80%</th> <th colspan="2">20%</th> <th colspan="2">50%</th> </tr> <tr> <th>50%</th> <th>30%</th> <th>50%</th> <th>30%</th> <th>50%</th> <th>30%</th> </tr> </thead> <tbody> <tr><td>1</td><td>84</td><td>83</td><td>83</td><td>82</td><td>80</td><td>79</td><td></td></tr> <tr><td>2</td><td>81</td><td>79</td><td>80</td><td>78</td><td>77</td><td>76</td><td></td></tr> <tr><td>3</td><td>78</td><td>76</td><td>77</td><td>75</td><td>75</td><td>74</td><td></td></tr> <tr><td>4</td><td>76</td><td>73</td><td>75</td><td>73</td><td>73</td><td>72</td><td></td></tr> <tr><td>5</td><td>73</td><td>71</td><td>73</td><td>70</td><td>72</td><td>70</td><td></td></tr> <tr><td>6</td><td>72</td><td>69</td><td>71</td><td>69</td><td>70</td><td>68</td><td></td></tr> <tr><td>7</td><td>70</td><td>67</td><td>69</td><td>67</td><td>69</td><td>66</td><td></td></tr> <tr><td>8</td><td>68</td><td>66</td><td>68</td><td>65</td><td>67</td><td>65</td><td></td></tr> <tr><td>9</td><td>67</td><td>64</td><td>66</td><td>64</td><td>66</td><td>64</td><td></td></tr> <tr><td>10</td><td>65</td><td>63</td><td>65</td><td>63</td><td>65</td><td>62</td><td></td></tr> </tbody> </table>	pf	pc	80%		20%		50%		50%	30%	50%	30%	50%	30%	1	84	83	83	82	80	79		2	81	79	80	78	77	76		3	78	76	77	75	75	74		4	76	73	75	73	73	72		5	73	71	73	70	72	70		6	72	69	71	69	70	68		7	70	67	69	67	69	66		8	68	66	68	65	67	65		9	67	64	66	64	66	64		10	65	63	65	63	65	62		<table border="1"> <thead> <tr> <th rowspan="2">Mount height</th> <th rowspan="2">Initial fc at beam center</th> <th colspan="2">50% beam angle 15.3°</th> <th colspan="2">10% beam angle 34.2°</th> </tr> <tr> <th>Beam diameter</th> <th>fc at beam edge</th> <th>Beam diameter</th> <th>fc at beam edge</th> </tr> </thead> <tbody> <tr><td>8'</td><td>232.3</td><td>1.5'</td><td>116.1</td><td>3.4'</td><td>23.2</td></tr> <tr><td>10'</td><td>124.9</td><td>2.0'</td><td>62.5</td><td>4.6'</td><td>12.5</td></tr> <tr><td>12'</td><td>77.9</td><td>2.6'</td><td>38.9</td><td>5.8'</td><td>7.8</td></tr> <tr><td>14'</td><td>53.1</td><td>3.1'</td><td>26.6</td><td>7.1'</td><td>5.3</td></tr> <tr><td>16'</td><td>38.6</td><td>3.6'</td><td>19.3</td><td>8.3'</td><td>3.9</td></tr> </tbody> </table>	Mount height	Initial fc at beam center	50% beam angle 15.3°		10% beam angle 34.2°		Beam diameter	fc at beam edge	Beam diameter	fc at beam edge	8'	232.3	1.5'	116.1	3.4'	23.2	10'	124.9	2.0'	62.5	4.6'	12.5	12'	77.9	2.6'	38.9	5.8'	7.8	14'	53.1	3.1'	26.6	7.1'	5.3	16'	38.6	3.6'	19.3	8.3'	3.9
	pf	pc	80%				20%		50%																																																																																																																																		
			50%	30%	50%	30%	50%	30%																																																																																																																																			
	1	84	83	83	82	80	79																																																																																																																																				
	2	81	79	80	78	77	76																																																																																																																																				
	3	78	76	77	75	75	74																																																																																																																																				
	4	76	73	75	73	73	72																																																																																																																																				
	5	73	71	73	70	72	70																																																																																																																																				
	6	72	69	71	69	70	68																																																																																																																																				
	7	70	67	69	67	69	66																																																																																																																																				
	8	68	66	68	65	67	65																																																																																																																																				
9	67	64	66	64	66	64																																																																																																																																					
10	65	63	65	63	65	62																																																																																																																																					
Mount height	Initial fc at beam center	50% beam angle 15.3°		10% beam angle 34.2°																																																																																																																																							
		Beam diameter	fc at beam edge	Beam diameter	fc at beam edge																																																																																																																																						
8'	232.3	1.5'	116.1	3.4'	23.2																																																																																																																																						
10'	124.9	2.0'	62.5	4.6'	12.5																																																																																																																																						
12'	77.9	2.6'	38.9	5.8'	7.8																																																																																																																																						
14'	53.1	3.1'	26.6	7.1'	5.3																																																																																																																																						
16'	38.6	3.6'	19.3	8.3'	3.9																																																																																																																																						
0°	0°	7027	0°-30°	806	73.2																																																																																																																																						
5°	5°	5017	0°-40°	817	74.2																																																																																																																																						
15°	15°	1182	0°-60°	817	74.2																																																																																																																																						
25°	25°	126	0°-90°	817	74.2																																																																																																																																						
35°	35°	15	90°-180°	0	0.0																																																																																																																																						
45°	45°	0	0°-180°	817	74.2*																																																																																																																																						
55°	55°	0	* Efficiency																																																																																																																																								
65°	65°	0																																																																																																																																									
75°	75°	0																																																																																																																																									
85°	85°	0																																																																																																																																									
90°	90°	0																																																																																																																																									

Distribution curve	Distribution data	Output data	Coefficient of utilization	Single luminaire data 30" above floor																																																																																																																																							
DLV DWN MR16 4AC, 50MR16Q/40/FL (EXN) lamp, 0.5 s/mh, 880 rated lumens, test no. 2198040605																																																																																																																																											
	From 0°	cp. Lumens	Zone Lumens %lamp	<table border="1"> <thead> <tr> <th rowspan="2">pf</th> <th rowspan="2">pc</th> <th colspan="2">80%</th> <th colspan="2">20%</th> <th colspan="2">50%</th> </tr> <tr> <th>50%</th> <th>30%</th> <th>50%</th> <th>30%</th> <th>50%</th> <th>30%</th> </tr> </thead> <tbody> <tr><td>1</td><td>74</td><td>73</td><td>73</td><td>71</td><td>70</td><td>69</td><td></td></tr> <tr><td>2</td><td>70</td><td>68</td><td>69</td><td>67</td><td>67</td><td>65</td><td></td></tr> <tr><td>3</td><td>67</td><td>64</td><td>66</td><td>64</td><td>64</td><td>62</td><td></td></tr> <tr><td>4</td><td>64</td><td>61</td><td>63</td><td>61</td><td>62</td><td>60</td><td></td></tr> <tr><td>5</td><td>61</td><td>58</td><td>61</td><td>58</td><td>60</td><td>57</td><td></td></tr> <tr><td>6</td><td>59</td><td>56</td><td>58</td><td>56</td><td>57</td><td>55</td><td></td></tr> <tr><td>7</td><td>57</td><td>54</td><td>56</td><td>53</td><td>55</td><td>53</td><td></td></tr> <tr><td>8</td><td>54</td><td>52</td><td>54</td><td>51</td><td>54</td><td>51</td><td></td></tr> <tr><td>9</td><td>53</td><td>50</td><td>52</td><td>49</td><td>52</td><td>49</td><td></td></tr> <tr><td>10</td><td>51</td><td>48</td><td>51</td><td>48</td><td>50</td><td>48</td><td></td></tr> </tbody> </table>	pf	pc	80%		20%		50%		50%	30%	50%	30%	50%	30%	1	74	73	73	71	70	69		2	70	68	69	67	67	65		3	67	64	66	64	64	62		4	64	61	63	61	62	60		5	61	58	61	58	60	57		6	59	56	58	56	57	55		7	57	54	56	53	55	53		8	54	52	54	51	54	51		9	53	50	52	49	52	49		10	51	48	51	48	50	48		<table border="1"> <thead> <tr> <th rowspan="2">Mount height</th> <th rowspan="2">Initial fc at beam center</th> <th colspan="2">50% beam angle 29.5°</th> <th colspan="2">10% beam angle 52.1°</th> </tr> <tr> <th>Beam diameter</th> <th>fc at beam edge</th> <th>Beam diameter</th> <th>fc at beam edge</th> </tr> </thead> <tbody> <tr><td>8'</td><td>58.6</td><td>2.9'</td><td>29.3</td><td>5.4'</td><td>5.9</td></tr> <tr><td>10'</td><td>31.5</td><td>4.0'</td><td>15.8</td><td>7.3'</td><td>3.2</td></tr> <tr><td>12'</td><td>19.6</td><td>5.0'</td><td>9.8</td><td>9.3'</td><td>2.0</td></tr> <tr><td>14'</td><td>13.4</td><td>6.1'</td><td>6.7</td><td>11.2'</td><td>1.3</td></tr> <tr><td>16'</td><td>9.7</td><td>7.1'</td><td>4.9</td><td>13.2'</td><td>1.0</td></tr> </tbody> </table>	Mount height	Initial fc at beam center	50% beam angle 29.5°		10% beam angle 52.1°		Beam diameter	fc at beam edge	Beam diameter	fc at beam edge	8'	58.6	2.9'	29.3	5.4'	5.9	10'	31.5	4.0'	15.8	7.3'	3.2	12'	19.6	5.0'	9.8	9.3'	2.0	14'	13.4	6.1'	6.7	11.2'	1.3	16'	9.7	7.1'	4.9	13.2'	1.0
	pf	pc	80%				20%		50%																																																																																																																																		
			50%	30%	50%	30%	50%	30%																																																																																																																																			
	1	74	73	73	71	70	69																																																																																																																																				
	2	70	68	69	67	67	65																																																																																																																																				
	3	67	64	66	64	64	62																																																																																																																																				
	4	64	61	63	61	62	60																																																																																																																																				
	5	61	58	61	58	60	57																																																																																																																																				
	6	59	56	58	56	57	55																																																																																																																																				
	7	57	54	56	53	55	53																																																																																																																																				
	8	54	52	54	51	54	51																																																																																																																																				
9	53	50	52	49	52	49																																																																																																																																					
10	51	48	51	48	50	48																																																																																																																																					
Mount height	Initial fc at beam center	50% beam angle 29.5°		10% beam angle 52.1°																																																																																																																																							
		Beam diameter	fc at beam edge	Beam diameter	fc at beam edge																																																																																																																																						
8'	58.6	2.9'	29.3	5.4'	5.9																																																																																																																																						
10'	31.5	4.0'	15.8	7.3'	3.2																																																																																																																																						
12'	19.6	5.0'	9.8	9.3'	2.0																																																																																																																																						
14'	13.4	6.1'	6.7	11.2'	1.3																																																																																																																																						
16'	9.7	7.1'	4.9	13.2'	1.0																																																																																																																																						
0°	0°	1773	0°-30°	548	62.3																																																																																																																																						
5°	5°	1646	0°-40°	577	65.6																																																																																																																																						
15°	15°	962	0°-60°	578	65.7																																																																																																																																						
25°	25°	291	0°-90°	578	65.7																																																																																																																																						
35°	35°	43	90°-180°	0	0.0																																																																																																																																						
45°	45°	1	0°-180°	578	65.7*																																																																																																																																						
55°	55°	0	* Efficiency																																																																																																																																								
65°	65°	0																																																																																																																																									
75°	75°	0																																																																																																																																									
85°	85°	0																																																																																																																																									
90°	90°	0																																																																																																																																									

Distribution curve	Distribution data	Output data	Coefficient of utilization	Single luminaire data 30" above floor																																																																																																																																							
DLV DWN MR16 4AC, Q71MR16/C/FL40 (EYC) lamp, 0.5 s/mh, 1100 rated lumens, test no. 2198043005																																																																																																																																											
	From 0°	cp. Lumens	Zone Lumens %lamp	<table border="1"> <thead> <tr> <th rowspan="2">pf</th> <th rowspan="2">pc</th> <th colspan="2">80%</th> <th colspan="2">20%</th> <th colspan="2">50%</th> </tr> <tr> <th>50%</th> <th>30%</th> <th>50%</th> <th>30%</th> <th>50%</th> <th>30%</th> </tr> </thead> <tbody> <tr><td>1</td><td>76</td><td>75</td><td>74</td><td>73</td><td>72</td><td>71</td><td></td></tr> <tr><td>2</td><td>72</td><td>70</td><td>71</td><td>69</td><td>69</td><td>67</td><td></td></tr> <tr><td>3</td><td>68</td><td>66</td><td>68</td><td>65</td><td>66</td><td>64</td><td></td></tr> <tr><td>4</td><td>65</td><td>62</td><td>65</td><td>62</td><td>63</td><td>61</td><td></td></tr> <tr><td>5</td><td>63</td><td>59</td><td>62</td><td>59</td><td>61</td><td>58</td><td></td></tr> <tr><td>6</td><td>60</td><td>57</td><td>59</td><td>57</td><td>59</td><td>56</td><td></td></tr> <tr><td>7</td><td>58</td><td>54</td><td>57</td><td>54</td><td>56</td><td>54</td><td></td></tr> <tr><td>8</td><td>55</td><td>52</td><td>55</td><td>52</td><td>54</td><td>52</td><td></td></tr> <tr><td>9</td><td>53</td><td>50</td><td>53</td><td>50</td><td>53</td><td>50</td><td></td></tr> <tr><td>10</td><td>52</td><td>48</td><td>51</td><td>48</td><td>51</td><td>48</td><td></td></tr> </tbody> </table>	pf	pc	80%		20%		50%		50%	30%	50%	30%	50%	30%	1	76	75	74	73	72	71		2	72	70	71	69	69	67		3	68	66	68	65	66	64		4	65	62	65	62	63	61		5	63	59	62	59	61	58		6	60	57	59	57	59	56		7	58	54	57	54	56	54		8	55	52	55	52	54	52		9	53	50	53	50	53	50		10	52	48	51	48	51	48		<table border="1"> <thead> <tr> <th rowspan="2">Mount height</th> <th rowspan="2">Initial fc at beam center</th> <th colspan="2">50% beam angle 28.6°</th> <th colspan="2">10% beam angle 52.9°</th> </tr> <tr> <th>Beam diameter</th> <th>fc at beam edge</th> <th>Beam diameter</th> <th>fc at beam edge</th> </tr> </thead> <tbody> <tr><td>8'</td><td>75.4</td><td>2.8'</td><td>37.7</td><td>5.5'</td><td>7.5</td></tr> <tr><td>10'</td><td>40.5</td><td>3.8'</td><td>20.3</td><td>7.5'</td><td>4.1</td></tr> <tr><td>12'</td><td>25.3</td><td>4.8'</td><td>12.6</td><td>9.5'</td><td>2.5</td></tr> <tr><td>14'</td><td>17.2</td><td>5.9'</td><td>8.6</td><td>11.4'</td><td>1.7</td></tr> <tr><td>16'</td><td>12.5</td><td>6.9'</td><td>6.3</td><td>13.4'</td><td>1.3</td></tr> </tbody> </table>	Mount height	Initial fc at beam center	50% beam angle 28.6°		10% beam angle 52.9°		Beam diameter	fc at beam edge	Beam diameter	fc at beam edge	8'	75.4	2.8'	37.7	5.5'	7.5	10'	40.5	3.8'	20.3	7.5'	4.1	12'	25.3	4.8'	12.6	9.5'	2.5	14'	17.2	5.9'	8.6	11.4'	1.7	16'	12.5	6.9'	6.3	13.4'	1.3
	pf	pc	80%				20%		50%																																																																																																																																		
			50%	30%	50%	30%	50%	30%																																																																																																																																			
	1	76	75	74	73	72	71																																																																																																																																				
	2	72	70	71	69	69	67																																																																																																																																				
	3	68	66	68	65	66	64																																																																																																																																				
	4	65	62	65	62	63	61																																																																																																																																				
	5	63	59	62	59	61	58																																																																																																																																				
	6	60	57	59	57	59	56																																																																																																																																				
	7	58	54	57	54	56	54																																																																																																																																				
	8	55	52	55	52	54	52																																																																																																																																				
9	53	50	53	50	53	50																																																																																																																																					
10	52	48	51	48	51	48																																																																																																																																					
Mount height	Initial fc at beam center	50% beam angle 28.6°		10% beam angle 52.9°																																																																																																																																							
		Beam diameter	fc at beam edge	Beam diameter	fc at beam edge																																																																																																																																						
8'	75.4	2.8'	37.7	5.5'	7.5																																																																																																																																						
10'	40.5	3.8'	20.3	7.5'	4.1																																																																																																																																						
12'	25.3	4.8'	12.6	9.5'	2.5																																																																																																																																						
14'	17.2	5.9'	8.6	11.4'	1.7																																																																																																																																						
16'	12.5	6.9'	6.3	13.4'	1.3																																																																																																																																						
0°	0°	2280	0°-30°	696	63.3																																																																																																																																						
5°	5°	2027	0°-40°	738	67.1																																																																																																																																						
15°	15°	1190	0°-60°	741	67.3																																																																																																																																						
25°	25°	405	0°-90°	744	67.6																																																																																																																																						
35°	35°	62	90°-180°	0	0.0																																																																																																																																						
45°	45°	1	0°-180°	744	67.6*																																																																																																																																						
55°	55°	1	* Efficiency																																																																																																																																								
65°	65°	1																																																																																																																																									
75°	75°	1																																																																																																																																									
85°	85°	1																																																																																																																																									
90°	90°	0																																																																																																																																									

NOTES
 1 Tested to current IES and NEMA standards under stabilized laboratory conditions. Various operating factors can cause differences between laboratory data and actual field measurements. Dimensions and specifications are based on the most current available data and are subject to change without notice.

B7,B8

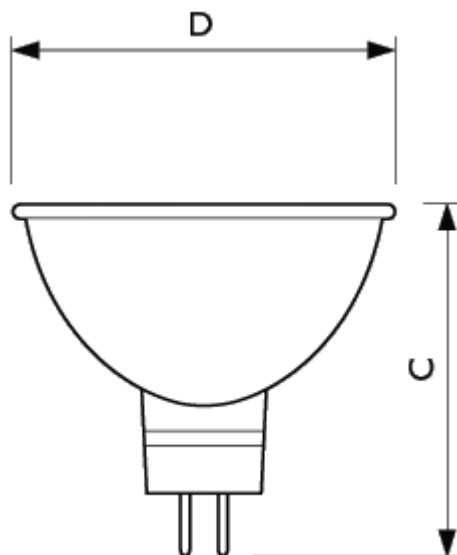
PHILIPS

Long Life ESX 20W GU5.3 12V MR16 10D CL 1CT

[| Save PDF](#) | [Open PDF](#)**General****PRODUCT DATA**

Product Number	378141
Full product name	Long Life ESX 20W GU5.3 12V MR16 10D CL 1CT
Ordering Code	20MRC16/SP10
Pack type	1 Lamp in a Folding Carton
Pieces per pack	1
Packs per case	50
Pack UPC	046677378141
EAN2US	-
Case Bar Code	50046677378146
Successor Product number	-
ANSI Code Halogen	ESX
Wattage[W]	20W
Base	GU5.3 [GU5.3]
Voltage[V]	12V
Bulb	MR16 [MR 16inch/50mm]
Beam Angle[D]	10D
Bulb Finish	CL [Clear]
Packing Type	1CT [1 Lamp in a Folding Carton]
Operating Position	Universal[Universal]
Packing Configuration	10X5F
Rated Avg. Life[hr]	-
Dimmable	Yes
Approx. MBCP[cd]	-
Color Rendering Index[Ra8]	100
Color Temperature[K]	3000
Overall Length C[mm]	46
Diameter D[mm]	50

Dimensions

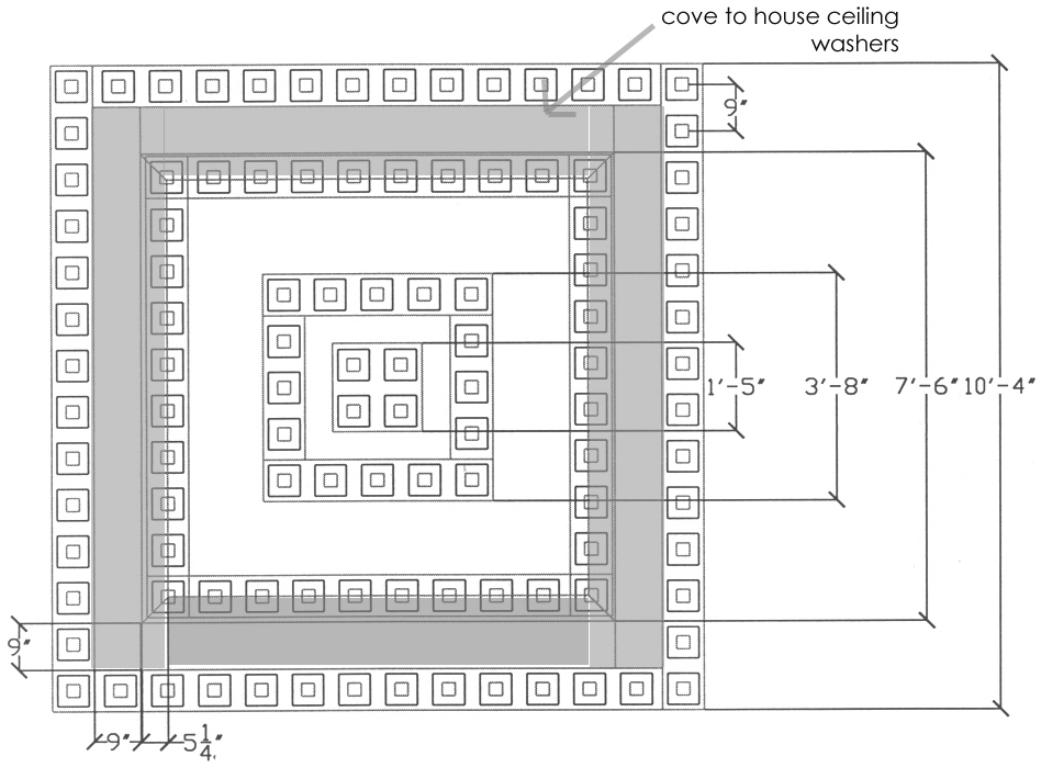


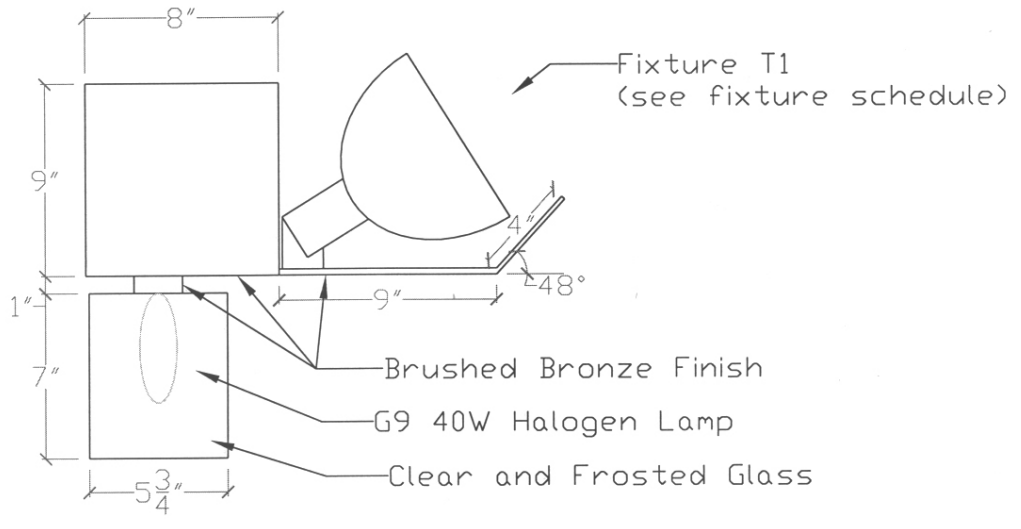
PRODUCT DIMENSIONS

Characteristic	Value
Overall Length C (DTB)	46 mm
Diameter D (DTB)	50 mm

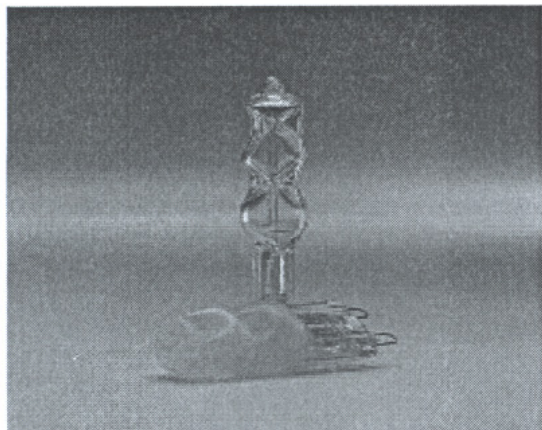
©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. [Privacy policy](#)
[Philips](#). Access to and use of this Web Site is subject to these [Terms of use](#).

FIXTURE D1 CUSTOM





CHANDELIER DETAIL



Product Number: 57017
Order Abbreviation: 40CAPSYLITE/G9/F/BL 120V
General Description: 40 WATT HALOGEN CAPSULE. FROSTED FINISH. G9 BASE.

Product Information

Abbrev. With Packaging Info.	40CAPSYLITEG9FBL 120V 10/CS 1/SKU
Approx. Lumens	480
Average Rated Life (hr)	2000
Base	G9 Bipin
Bulb	T4
Class	C (gas)
Color Temperature/CCT (K)	2900
Diameter (in)	0.5
Diameter (mm)	12.7
Ecologic	Yes
Filament	CC-2V
Lamp Finish	Frosted
Light Center Length - LCL (in)	7/8
Light Center Length - LCL (mm)	22
Maximum Overall Length - MOL (in)	1 11/16
Maximum Overall Length - MOL (mm)	43
Nominal Voltage (V)	120.00
Nominal Wattage (W)	40.00

Additional Product Information

Product Documents, Graphs, and Images

Packaging Information

Footnotes

- To avoid electric shock and/or skin burns, turn off power and allow bulb to cool before handling or attempting replacement.
- UV Filter Quartz
- Suitable for use in unshielded fixtures. Consult most recent luminaire standards for your area to determine luminaire requirements.



JOB: _____ D2

LOCATION: _____

DATE: _____

CATALOG: DECORATIVE D4 2003/04

PRODUCT SPECIFICATIONS

STYLE # D4-1027

SERIES NAME: ICE

STRUCTURE: Metal

COLOR /FINISH: ~~Aluminum~~ Custom Bronze Finish

DIFFUSER: Clear and Frost Glass

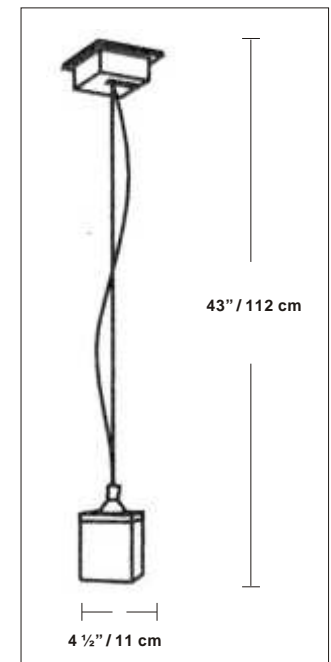
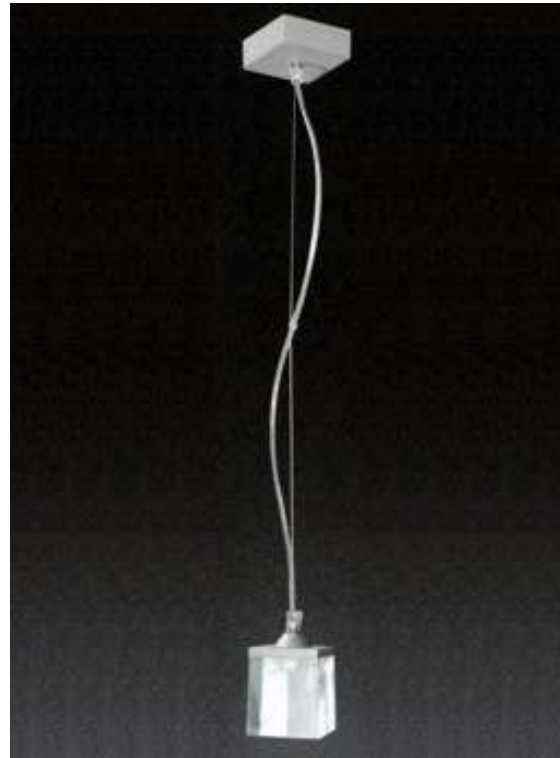
LAMP TYPE: Halogen G9 Frost 

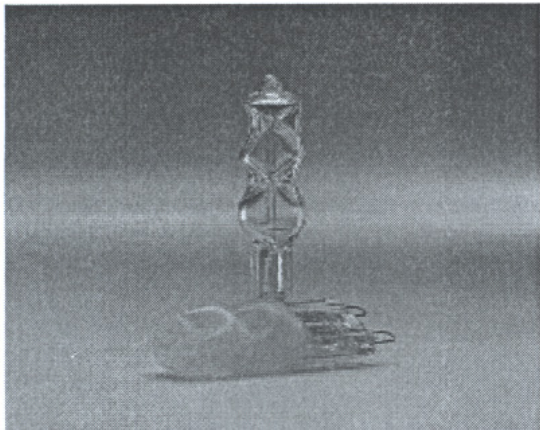
MAX WATT: 1 x 40W

DIMENSIONS: W. 4 1/2" x Ht. 43" x Ext. 4 1/2"

APPROVALS: Approved by CSA for
North American Standards.

NOTES: _____





Product Number: 57017
Order Abbreviation: 40CAPSYLITE/G9/F/BL 120V
General Description: 40 WATT HALOGEN CAPSULE. FROSTED FINISH. G9 BASE.

Product Information

Abbrev. With Packaging Info.	40CAPSYLITEG9FBL 120V 10/CS 1/SKU
Approx. Lumens	480
Average Rated Life (hr)	2000
Base	G9 Bipin
Bulb	T4
Class	C (gas)
Color Temperature/CCT (K)	2900
Diameter (in)	0.5
Diameter (mm)	12.7
Ecologic	Yes
Filament	CC-2V
Lamp Finish	Frosted
Light Center Length - LCL (in)	7/8
Light Center Length - LCL (mm)	22
Maximum Overall Length - MOL (in)	1 11/16
Maximum Overall Length - MOL (mm)	43
Nominal Voltage (V)	120.00
Nominal Wattage (W)	40.00

Additional Product Information

Product Documents, Graphs, and Images

Packaging Information

Footnotes

- To avoid electric shock and/or skin burns, turn off power and allow bulb to cool before handling or attempting replacement.
- UV Filter Quartz
- Suitable for use in unshielded fixtures. Consult most recent luminaire standards for your area to determine luminaire requirements.

4. VOLTAGE

- 120 277
- 208 347
- 240 480

(Electronic ballast available only in 120 or 277 volts.)
(Quartz available in 120 volt only.)

5. BALLAST (H.I.D. ONLY)

- CORE & COIL (C)
- ELECTRONIC (EB)

(Ballast is an integral part of the fixture housing.)

(Electronic ballast available only in 70WMH and 100WMH, and in 120 or 277 volt. Rated for -20 F (-28.9 C).)

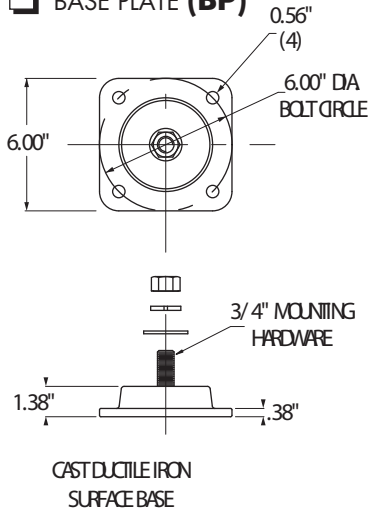
(Core and coil ballast is high-power factor and rated for -20 F (-28.9 C).)

6. MODEL

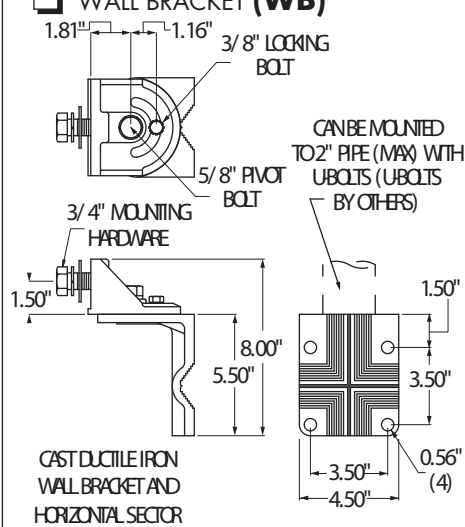
- YOKE (YK)

7. MOUNTING OPTIONS

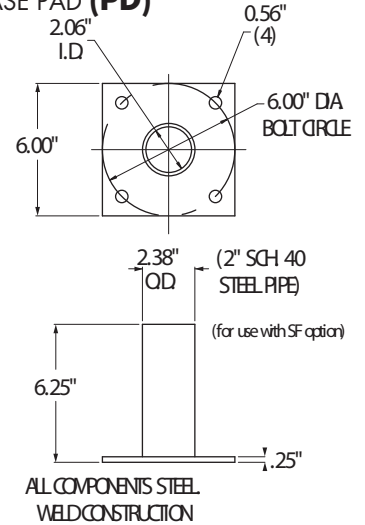
BASE PLATE (BP)



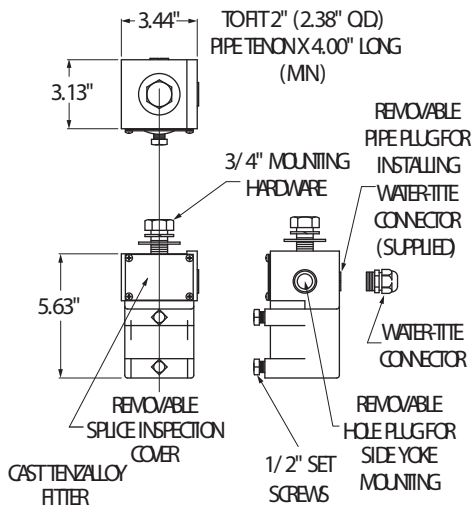
WALL BRACKET (WB)



BASE PAD (PD)

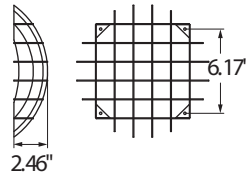


SLIP FITTER (SF)

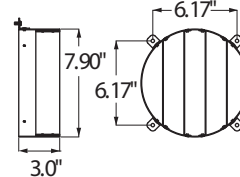


8. OPTIONAL SHIELDS

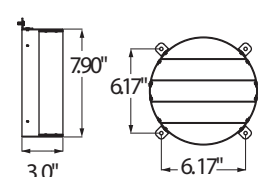
EGGCRATE (EC)



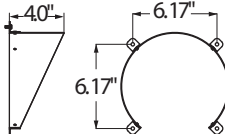
VER. LOUVER (VL)



HOR. LOUVER (HL)



TOP SHIELD (TS)



CUSTOM SHIELD (CS)

The eggcrate is the only shield finished to match luminaire. Standard shield finish is black unless otherwise specified.

9. FINISH

- BLACK (BK)
- DARK BRONZE (BZ)
- WHITE (WH)
- NATURAL ALUMINUM (AL)
- NON-STANDARD (NS)

10. GENERAL OPTIONS

INCLUDE LAMP (LP)

(SELECT 'LP' ONLY IF A LAMP IS TO BE INCLUDED)

- 70MH ED17 100HPS ED17
- 100MH ED17 150HPS ED17
- 150MH ED17
- 175MH ED17 500QTZ PAR56

SAFETY CABLE (SC)

FUSE LUMINAIRE (FL)

REMARKS:



STERNER™
INFRANOR™

STERNER LIGHTING SYSTEMS INCORPORATED

351 LEWIS AVENUE WEST, P.O. BOX 805 WINSTED, MN 55395-0805
TEL 320.485.2141 FAX 320.485.2881 TOLL-FREE 800.328.7480
2/2002 www.sternerlighting.com

01

PHILIPS

MasterColor CDM 100W/830 Med ED17P CL ALTO+FB

[| Save PDF](#) | [Open PDF](#)**General****PRODUCT DATA**

Product Number	233684
Full product name	MasterColor CDM 100W/830 Med ED17P CL ALTO+FB
Ordering Code	MHC100/U/MP/3K ALTO
Pack type	1 Sleeve Open End
Pieces per pack	1
Packs per case	12
Pack UPC	046677233686
EAN2US	-
Case Bar Code	50046677233681
Successor Product number	-
Wattage[W]	100W
Color Code	830 [CCT of 3000K]
Base	Med [Medium]
Bulb	ED17P [Diameter: 2.125 inch Protected]
Bulb Finish	CL [Clear]
Feature	ALTO+FB [ALTO® + FadeBlock™]
Base Information	Brass[Brass Base]
Bulb Material	Hard Glass
Execution	Protected
Operating Position	Universal[Universal]
Packing Type	1SL[1 Sleeve Open End]
Packing Configuration	12
Rated Avg. Life[hr]	16000
Mercury Weight[mg]	7.2
ANSI Code HID	M140/M90/O
Lamp Voltage[V]	101
Color Rendering Index[Ra8]	85
Color Designation	Warm White
Color Temperature[K]	3000

Initial Lumens[Lm]	8600
Design Mean Lumens[Lm]	6450
Light Center Length L [inch][in]	3.438
Max Overall Length (MOL) - C[in]	5.438
Diameter D[in]	2.125

Dimensions



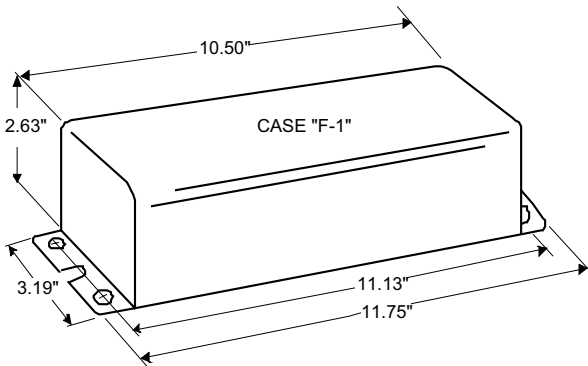
©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. [Privacy policy](#)
[Philips](#). Access to and use of this Web Site is subject to these [Terms of use](#).



Metal Halide Lamp Ballast

Catalog Number 72C5381
For 100W M90/M140
60 Hz HX-HPF
Status: Active

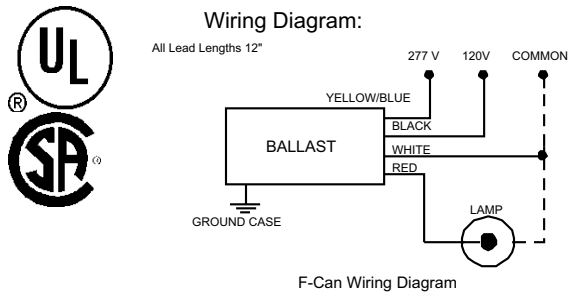
DIMENSIONS AND DATA



INPUT VOLTS		120	277			
CIRCUIT TYPE	HX-HPF					
POWER FACTOR (min)	90%					
REGULATION						
Line Volts	±5%					
Lamp Watts	±12%					
LINE CURRENT (Amps)						
Operating.....		1.10	0.48			
Open Circuit.....		2.55	1.10			
Starting.....		2.20	0.95			
UL TEMPERATURE RATINGS						
Insulation Class	A (105°C)					
Coil Temperature Code	1029	A	A			
MIN. AMBIENT STARTING TEMP.	-20°F or -30°C					
NOM. OPEN CIRCUIT VOLTAGE	277					
INPUT VOLTAGE AT LAMP DROPOUT.....		72	166			
INPUT WATTS	125					
RECOMMENDED FUSE (Amps).....		6	3			
CORE and COIL						
Dimension (A)						
Dimension (B)						
Weight (lbs.)	11					
Lead Lengths	12"					
CAPACITOR REQUIREMENT						
Microfarads						
Volts (min.)						
Fault Current Withstand (amps)						
60 Hz TEST PROCEDURES (Refer to Advance Test Procedure for HID Ballasts - Form 1270)						
High Potential Test (Volts)						
1 minute						
2 seconds	1600					
Open Circuit Voltage Test (Volts)	2000					
Short-Circuit Current Test (Amps)	250-305					
Secondary Current						
Input Current.....	1.30-1.60	0.70	0.30	-	-	-
		1.10	0.50			

Capacitor:

The capacitor is included as part of the potted assembly.



Ignitor: IN CAN

The ignitor is included as part of the potted assembly.

Ballast to Lamp Distance (BTL) = 15 feet
 Temp Rating: 90°C

Ordering Information

Order Suffix	Description

Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice.

ADVANCE TRANSFORMER CO.

O'HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018
 Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 630-307-3071
 Corporate Offices: Phone: 800-322-2086

LEDdot

Lichtpunkt mit 9 LED aus Edelstahl, mit klarem Abdeckglas zur punktuellen Beleuchtung oder in opaler Optik mit homogener Leuchtdichte.

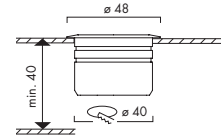
Light spot with 9 LED in stainless steel, with clear glass cover for point illumination or in opal optic with homogeneous luminance.

Spot lumineux avec 9 LED en acier inoxydable, avec verre de protection transparent pour un éclairage ponctuel, ou verre de couleur opale pour une luminosité homogène.



- 03 LBS 4201** rot/red/rouge
- 03 LBS 4211** gelb/yellow/jaune
- 03 LBS 4221** grün/green/vert
- 03 LBS 4231** blau/blue/bleu
- 03 LBS 4241** weiß/white/blanc

Sonderfarben auf Anfrage.
Special colours on request.
Couleurs spéciaux sur demande.



LED

LEDdot

24 V DC
1,2 W

0,1 kg



Anschluß mit 2-poligem Kabel.
Begeh- und überrollbar, jedoch
nicht für Verkehrswege zugelassen.
Connection via 2-pole cable. Drive-
over proof but not approved for
traffic ways.
Connexion par câble 2-pôle.
Résistant à la charge à court terme.



230/240 V

15 LE 0026 24 V/20 W/IP 20

15 LE 0059 24 V/75 W/IP 20

15 LE 9120 24 V/120 W/IP 20

DESCRIPTION

Coronado 806 is a ultra-compact line voltage fixture for use with PAR20 halogen lamps. The fully adjustable mounting stem provides 340° tilt and 360° rotation for easy aiming. Various lenses, louvers and color or dichroic filters can be combined – up to three at once – to create multiple lighting effects. Lumière's exclusive Siphon Protection System (S.P.S.) prevents water from siphoning into the fixture through its own lead wires.

SPECIFICATION FEATURES

MATERIAL

Hood and mounting stem are precision-machined from corrosion-resistant 6061-T6 aluminum billet. Housing is die-cast aluminum.

FINISH

Fixtures are double protected by a chromate conversion undercoating and polyester powdercoat paint finish, surpassing the rigorous demands of the outdoor environment. A variety of standard colors are available.

HOOD

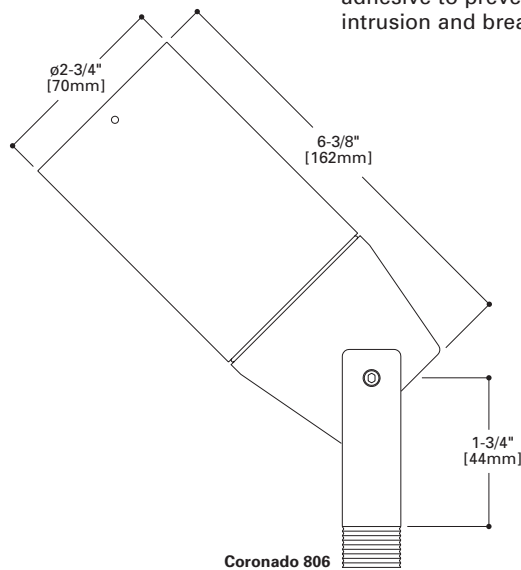
Hood is removable for easy relamping and accepts up to three internal accessories at once (lenses, louvers, filters) to achieve multiple lighting effects. Weep holes prevent water and mineral stains from collecting on the lens, even in the straight-up position.

GASKET

Housing and hood are sealed with a high temperature silicone o-ring gasket to prevent water intrusion.

LENS

Tempered glass lens, factory sealed with high temperature adhesive to prevent water intrusion and breakage due to



Catalog #	Type
Project	O3
Comments	
Prepared by	Date

thermal shock.

MOUNTING STEM

Adjustable side-mounted swivel stem provides 340° tilt and 360° rotation for easy aiming. Equipped with standard 1/2" NPS threaded male fitting. Stainless steel aim-locking mechanisms are standard. Lumière's exclusive Siphon Protection System (S.P.S.) prevents water from siphoning into the fixture through its own lead wires.

HARDWARE

Stainless steel hardware is standard to provide maximum corrosion-resistance.

SOCKET

Ceramic socket with 200° C Teflon® coated lead wires and medium base.

ELECTRICAL

Operates with 120V line voltage.

LAMP

Not included. Available from Lumière as an accessory – see *Lamps* under *Optical Accessories* on the reverse side of this page.

LABELS & APPROVALS

UL and cUL listed, standard wet label. Manufactured to ISO 9001-2000 Quality Systems Standard. IBEW union made.

WARRANTY

Lumière warrants its fixtures against defects in materials & workmanship for three (3) years. Auxiliary equipment such as transformers, ballasts and lamps carry the original manufacturer's warranty.



CORONADO 806

50 W (max.) PAR20
Halogen
LINE VOLTAGE
ACCENT/FLOOD

ORDERING INFORMATION

SAMPLE NUMBER: 806-50PAR20-120-BK

Model 806	Source 50PAR20 <i>Halogen</i> 50PAR20 = 50W/PAR20/medium <i>Lamp not included</i>	Volts 120 120 = 120V	Finish Painted BK = Black BZ = Bronze CS = City silver VE = Verde WT = White	Accessories (Order Separately) See reverse page
---------------------	--	-----------------------------------	---	--

PHOTOMETRIC DATA

Coronado 806
Lamp=50PAR20/NSP
CBCP=5000

Cone of Light

Distance to Illuminated Plane	Initial Nadir Footcandles	Beam Diameter
25'0"	8	10'0"
20'0"	13	8'0"
15'0"	23	6'0"
12'0"	35	5'0"
10'0"	50	4'0"
8'0"	80	3'0"



Coronado 806
Lamp=50PAR20/NFL
CBCP=1400

Cone of Light

Distance to Illuminated Plane	Initial Nadir Footcandles	Beam Diameter
25'0"	2	20'0"
20'0"	3	16'0"
15'0"	6	12'0"
12'0"	9	9'6"
10'0"	13	8'0"
8'0"	20	6'6"

**LAMP INFORMATION**

Lamp	ANSI Code	Watts	Beam Spread	CBCP	°K	Life (hrs.)	Base	Volts
50PAR20/NSP	---	50	10°	5000	---	2000	medium	120
50PAR20/NFL	---	50	30°	1400	---	2000	medium	120

NOTE: Inferior quality lamps may adversely affect the performance of this product. Use only name brand lamps from reputable lamp manufacturers.

OPTICAL ACCESSORIES**Color & Dichroic Filters**

F22-20 = Red color	F71-20 = Peach dichroic	F76-20 = Red dichroic
F33-20 = Blue color	F72-20 = Amber dichroic	F77-20 = Dark blue dichroic
F44-20 = Green color	F73-20 = Green dichroic	F78-20 = Light blue dichroic
F55-20 = Yellow color	F74-20 = Medium blue dichroic	F79-20 = Neutral density dichroic
F66-20 = Mercury vapor color	F75-20 = Yellow dichroic	F80-20 = Magenta dichroic

Lamps

HP2050-NSP = 50-watt PAR20 lamp - narrow spot

HP2050-NFL = 50-watt PAR20 lamp - narrow flood

Lower wattage lamps and/or additional distributions may be available. See the *Accessories & Technical Data* section of this catalog for details.

Lenses & Louvers

DIF-20 = Diffused lens

LSL-20 = Linear spread lens

OSL-20 = Overall spread lens

LVR-20 = Hex cell louver

Glare Shields

FH20 = Angled glare shield (specify finish: BK, BZ, CS, VE, WT)

MOUNTING ACCESSORIES

See the *Accessories & Technical Data* section of this catalog for details.

NOTES AND FORMULAS

- Beam diameter is to 50% of maximum footcandles, rounded to the nearest half-foot.
- Footcandle values are initial. Apply appropriate light loss factors where necessary.
- Bare lamp data shown. Consult lamp manufacturers to obtain detailed specifications for their lamps.

Specifications and Dimensions subject to change without notice.

PHILIPS

Halogena 50W Med 120V PAR20 FL 25D CL 1CT

[| Save PDF](#) | [Open PDF](#)**General****PRODUCT DATA**

Product Number	389163
Full product name	Halogena 50W Med 120V PAR20 FL 25D CL 1CT
Ordering Code	50PAR20/HAL/NFL30
Pack type	1 Lamp in a Folding Carton
Pieces per pack	1
Packs per case	6
Pack UPC	046677229115
EAN2US	-
Case Bar Code	50046677389166
Successor Product number	-
Wattage[W]	50W
Base	Med [Medium]
Voltage[V]	120V
Bulb	PAR20 [PAR 20inch/63mm]
Beam Description	FL [Flood]
Beam Angle[D]	25D
Bulb Finish	CL [Clear]
Packing Type	1CT [1 Lamp in a Folding Carton]
Base Information	Brass[Brass Base]
Bulb Material	Hard Glass
Reflector Finish	Aluminized
Filament Shape	CC-8[Axial]
Operating Position	Universal[Universal]
Packing Configuration	6
Atmosphere	Gas
Rated Avg. Life[hr]	3000
Approx. MBCP[cd]	900
Color Rendering Index[Ra8]	100
Color Temperature[K]	2800

Initial Lumens[Lm]	525
Max Overall Length (MOL) - C[in]	3.375
Diameter D[in]	2.5

Dimensions



©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. [Privacy policy](#)
[Philips](#). Access to and use of this Web Site is subject to these [Terms of use](#).

M9700 SERIES METAL HALIDE 175 WATT MAX. MODULAR IN-GRADE LUMINAIRE DOUBLE LENS

DESCRIPTION:

The M9700 series modular in-grade lights are Multi-Purpose units designed for Flush Mounting in a variety of substrates or materials. The M9700's are used to uplight Architectural and Landscape features. The units consist of a Factory –Sealed, thermally protected Lamp Module. Power Module is in a secured Rough-In section (RIS) which includes Channeled Convective Cooling, an integral Junction Box, and Door Assembly. The double lensed version offers Lamp Module Aiming and feature Aim-Lock™ to allow maintenance and relamping without re-aiming. The M9700 has a small footprint with a cylinder configuration.

SPECIFICATIONS:

DOOR FINISH: Cast aluminum, cast aluminum or bronze with stainless perforated trim insert or Stainless Steel. Round or square with two stainless steel captive fasteners that lock the Lamp Module into the Rough-In Section.

ROUGH-IN SECTION: Injection molded polymer with integral junction box for branch wiring, U.V. stabilized, impact and corrosion resistant for use in all types of environments. Houses Power Module, Lamp Modules and finishing components. Adjustment ring provides 360° aim rotation with keyed section to receive Lamp Module. Ring locks into position with stainless steel fasteners. RIS has a cylinder/vault configuration.

LAMP MODULE: Stainless steel, sealed and purged of all moisture with silicone gaskets, stainless steel clamp band and single fastener. Electrical connection to Lamp Module is done through submersible connector with gold-plated contacts. **THERMALLY PROTECTED. LAMP INCLUDED**

LAMP TYPES: See ordering guide. If a specific lamp is desired, specify manufacturer's lamp number, most lamps can be supplied. **LAMP INCLUDED.**

VOLTAGES: 120V, 208V, 240V, 277V, 347V - 60 Hz, 220V, 230V, 240V - 50 Hz. Some restrictions may apply.

LIGHT DISTRIBUTIONS (Non Reflectorized Lamps):

TSP (G-12 T6 Lamps)
SP (E-17, Elliptical)
NFL (E-17, Elliptical, T6)
MFL (E-17, Elliptical, T6)
WFL (E-17, Elliptical)
WWD (E-17, Elliptical)

FINISHING SECTION:

Double Lens: Includes 360° Aim-Lock™ Module Support Ring, Door Assembly, Tilt Ring, and Module Indexing Segment providing maintenance and relamping without re-aiming. The Lamp Module is suspended below the door lens in a surface adjustable, 15° tilt mechanism. The insulating air layer reduces surface temperatures. Active lenses are available to bend beams (10° tilt and 20° tilt).

POWER MODULE: Ballast is encapsulated in a custom-heat dissipating epoxy resin to eliminate all moisture intrusion to the ballast. Provided with submersible rated cord/connector for connection to integral junction box and lamp module. HID ballasts are magnetic. **THERMALLY PROTECTED.**

TYPE _____

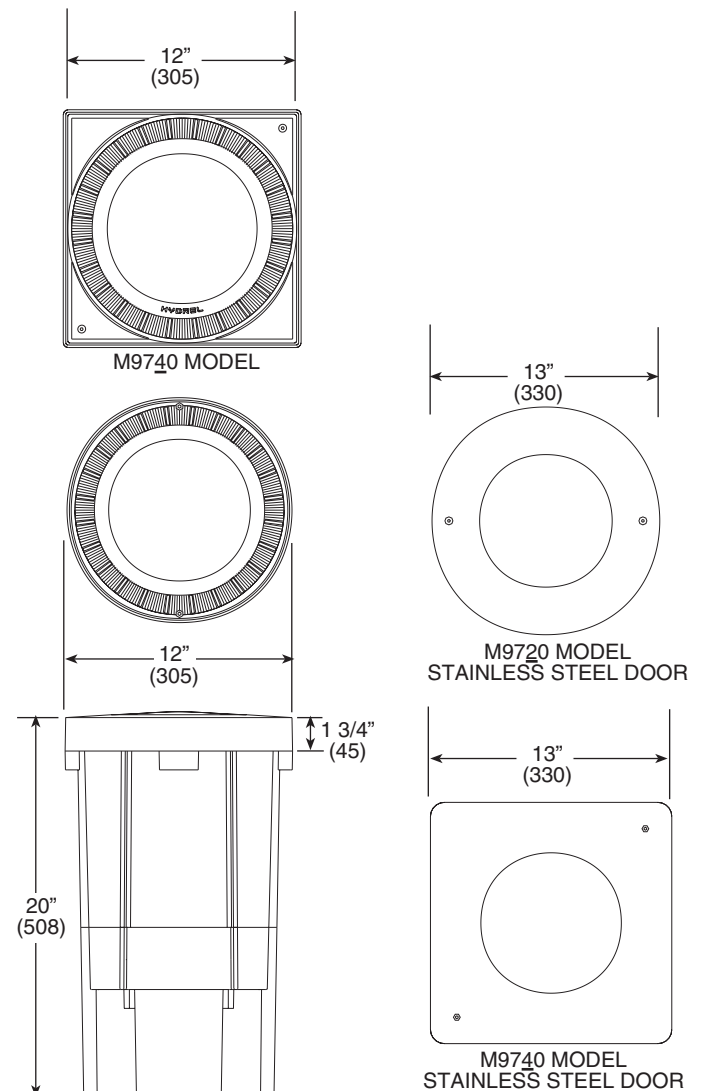
MODEL #: _____

ELECTRICAL ENTRIES/JUNCTION BOX: Two PG 16 or two 3/4" NPT bottom openings, standard. One hole is provided with IP68 cord seal that accepts \varnothing 10mm to \varnothing 14 mm cable (outside U.S. only). Second hole plugged. Box suitable for through branch wiring. Splicing volume 52 cu. in.

ACCESSORIES: Internal Glare Control, Internal Honeycomb Louvers, Rock Guards, Trim Rings, Re-enterable Potting Compound, Polycarbonate Covers, External Glare Shields are available.

NOTE: HYDREL RESERVES THE RIGHT TO CHANGE ANY SPECIFICATION WITHOUT NOTICE.

Any dimension on this sheet is to be assumed as a reference dimension: "Used for information purposes only. It does not govern manufacturing or inspection requirements." (ANSI Y14.5-1973)



PATENT PENDING
UL/CE

FIXTURE OPTIONS

Ordering and Specification Guide

M9720 A 35MT6 120 TSP 34BNPT STR

Model:

M9720
M9740

Round Double Lens
Square Double Lens

Material:

A Aluminum
B **Bronze**
ABL Aluminum with black paint
ASP Aluminum with stainless perf.*
BBP Bronze with brass perf.*
BSP Bronze with stainless perf.*
SS Stainless steel

*ASP, BBP, BSP not available with M9740 (square double lens) model

Lamp Type: (Lamp Included)

		US	European
HID			
50S	(HPS)	E17, med. base	Elliptical, E27 base
70S	(HPS)	E17, med. base	Elliptical, E27 base*
100S	(HPS)	E17, med. base	Elliptical, E27 base*
150S	(HPS)	E17, med. base	E26**
50M	(MH)	E17, med. base	N/A
70M	(MH)	E17, med. base	Elliptical, E27 base
100M	(MH)	E17, med. base	Elliptical, E27 base
150M	(MH)	E17, med. base	Elliptical, E27 base
175M	(MH)	E17, med. base	N/A
50H	(MV)	E17, med. base	Elliptical, E27 base
75H	(MV)	E17, med. base	N/A
80H	(MV)	N/A	Elliptical, E27 base
100H	(MV)	E17, med. base	Elliptical, E27 base
175H	(MV)	E17, med. base	N/A
35MT6	(MH)	T6, G-12 base	T-6, G12 base
70MT6	(MH)	T6, G-12 base	T-6, G12 base
150MT6	(MH)	T6, G-12 base	T-6, G12 base

HID, PAR Lamps (PAR-38, med. base)***

P3870M	WFL	(MH, 70W, wide flood)
P3870M	FL	(MH, 70W, flood)
P3870M	SP	(MH, 70W, spot)
P38100M	WFL	(MH, 100W, wide flood)
P38100M	FL	(MH, 100W, flood)
P38100M	SP	(MH, 100W, spot)
P38100H	FL	(MV, 100W, flood)
P38100H	SP	(MV, 100W, spot)
P38175H	FL	(MV, 175W, flood)
P38175H	SP	(MV, 175W, spot)
P38175M	FL	(MH, 175W, flood)
P38175M	SP	(MH, 175W, spot)

***HID PAR lamps not available with E27 base

**Not CE listed

*Note: No internal accessories available with E27 base 70S or 100S

Voltage:

60HZ 50HZ
120 22050HZ
208 23050HZ
220 24050HZ
240
277
347

Not all Voltage/Lamp combinations are available, consult factory for more information.

Distributions:

TSP (G-12 T6 Lamps)
SP **(E-17, Elliptical, PAR-38)**
NFL (E-17, Elliptical, T6)
MFL (E-17, Elliptical, T6, PAR-38)
WFL (E-17, Elliptical, PAR-38)
WWD (E-17, Elliptical)

Conduit Entries:

12BNPT 1/2" NPT bottom
12SNPT 1/2" NPT side
34BNPT 3/4" NPT bottom
34SNPT 3/4" NPT side
1BNPT 1" NPT bottom
PG16B PG16 bottom
PG16S PG16 side

Accessories:

FLC5 5° Axial Spread Lens
GS Glare Shield++
IHL38 Internal Honeycomb Louver (PAR-38 Lamps)
IHL Internal Honeycomb Louver (Non-Adjustable)
ISS Internal Source Shield (150W max, Elliptical and T-6 lamps only)
LC Polycarbonate Protective Cover**
RG Rockguard**
STR Stainless Steel Trim Ring, Round
STS Stainless Steel Trim Ring, Square
FLC10 10° Tilt Lens
FLC20 20° Tilt Lens
PC2112 20 cu. in. Re-enterable Potting Compound
WWL Wall Wash Louver

**Not available with Stainless Steel (SS) model

For Replacement Parts Consult Factory

O4

PHILIPS

MasterColor CDM 100W/830 Med ED17P CL ALTO+FB

[| Save PDF](#) | [Open PDF](#)**General****PRODUCT DATA**

Product Number	233684
Full product name	MasterColor CDM 100W/830 Med ED17P CL ALTO+FB
Ordering Code	MHC100/U/MP/3K ALTO
Pack type	1 Sleeve Open End
Pieces per pack	1
Packs per case	12
Pack UPC	046677233686
EAN2US	-
Case Bar Code	50046677233681
Successor Product number	-
Wattage[W]	100W
Color Code	830 [CCT of 3000K]
Base	Med [Medium]
Bulb	ED17P [Diameter: 2.125 inch Protected]
Bulb Finish	CL [Clear]
Feature	ALTO+FB [ALTO® + FadeBlock™]
Base Information	Brass[Brass Base]
Bulb Material	Hard Glass
Execution	Protected
Operating Position	Universal[Universal]
Packing Type	1SL[1 Sleeve Open End]
Packing Configuration	12
Rated Avg. Life[hr]	16000
Mercury Weight[mg]	7.2
ANSI Code HID	M140/M90/O
Lamp Voltage[V]	101
Color Rendering Index[Ra8]	85
Color Designation	Warm White
Color Temperature[K]	3000

Initial Lumens[Lm]	8600
Design Mean Lumens[Lm]	6450
Light Center Length L [inch][in]	3.438
Max Overall Length (MOL) - C[in]	5.438
Diameter D[in]	2.125

Dimensions



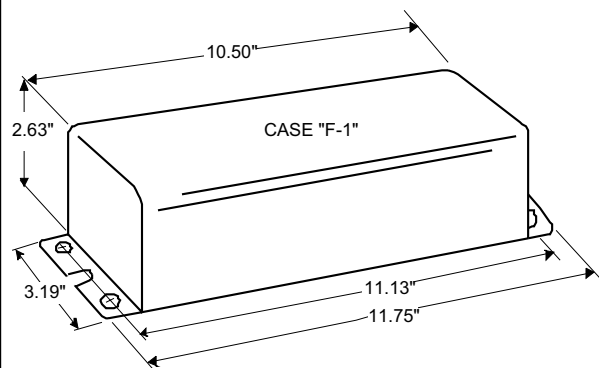
©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. [Privacy policy](#)
[Philips](#). Access to and use of this Web Site is subject to these [Terms of use](#).



Metal Halide Lamp Ballast

Catalog Number 72C5381
For 100W M90/M140
60 Hz HX-HPF
Status: Active

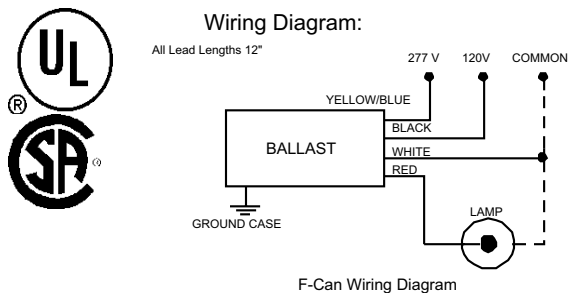
DIMENSIONS AND DATA



INPUT VOLTS		120	277			
CIRCUIT TYPE	HX-HPF					
POWER FACTOR (min)	90%					
REGULATION						
Line Volts	±5%					
Lamp Watts	±12%					
LINE CURRENT (Amps)						
Operating.....		1.10	0.48			
Open Circuit.....		2.55	1.10			
Starting.....		2.20	0.95			
UL TEMPERATURE RATINGS						
Insulation Class	A (105°C)					
Coil Temperature Code	1029	A	A			
MIN. AMBIENT STARTING TEMP.	-20°F or -30°C					
NOM. OPEN CIRCUIT VOLTAGE	277					
INPUT VOLTAGE AT LAMP DROPOUT.....		72	166			
INPUT WATTS	125					
RECOMMENDED FUSE (Amps).....		6	3			
CORE and COIL						
Dimension (A)						
Dimension (B)						
Weight (lbs.)	11					
Lead Lengths	12"					
CAPACITOR REQUIREMENT						
Microfarads						
Volts (min.)						
Fault Current Withstand (amps)						
60 Hz TEST PROCEDURES (Refer to Advance Test Procedure for HID Ballasts - Form 1270)						
High Potential Test (Volts)						
1 minute						
2 seconds	1600					
Open Circuit Voltage Test (Volts)	2000					
Short-Circuit Current Test (Amps)	250-305					
Secondary Current						
Input Current.....	1.30-1.60	0.70	0.30	-	-	-
		1.10	0.50			

Capacitor:

The capacitor is included as part of the potted assembly.



Ignitor: IN CAN

The ignitor is included as part of the potted assembly.

Ballast to Lamp Distance (BTL) = 15 feet
 Temp Rating: 90°C

Ordering Information

Order Suffix	Description

Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice.

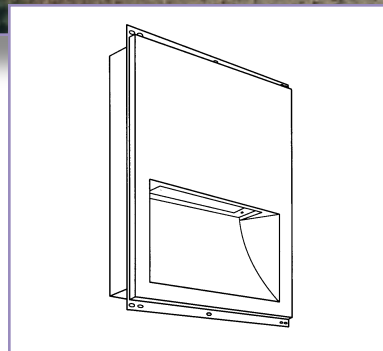
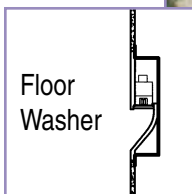
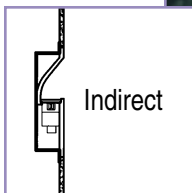
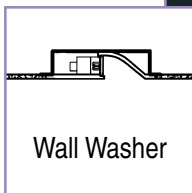
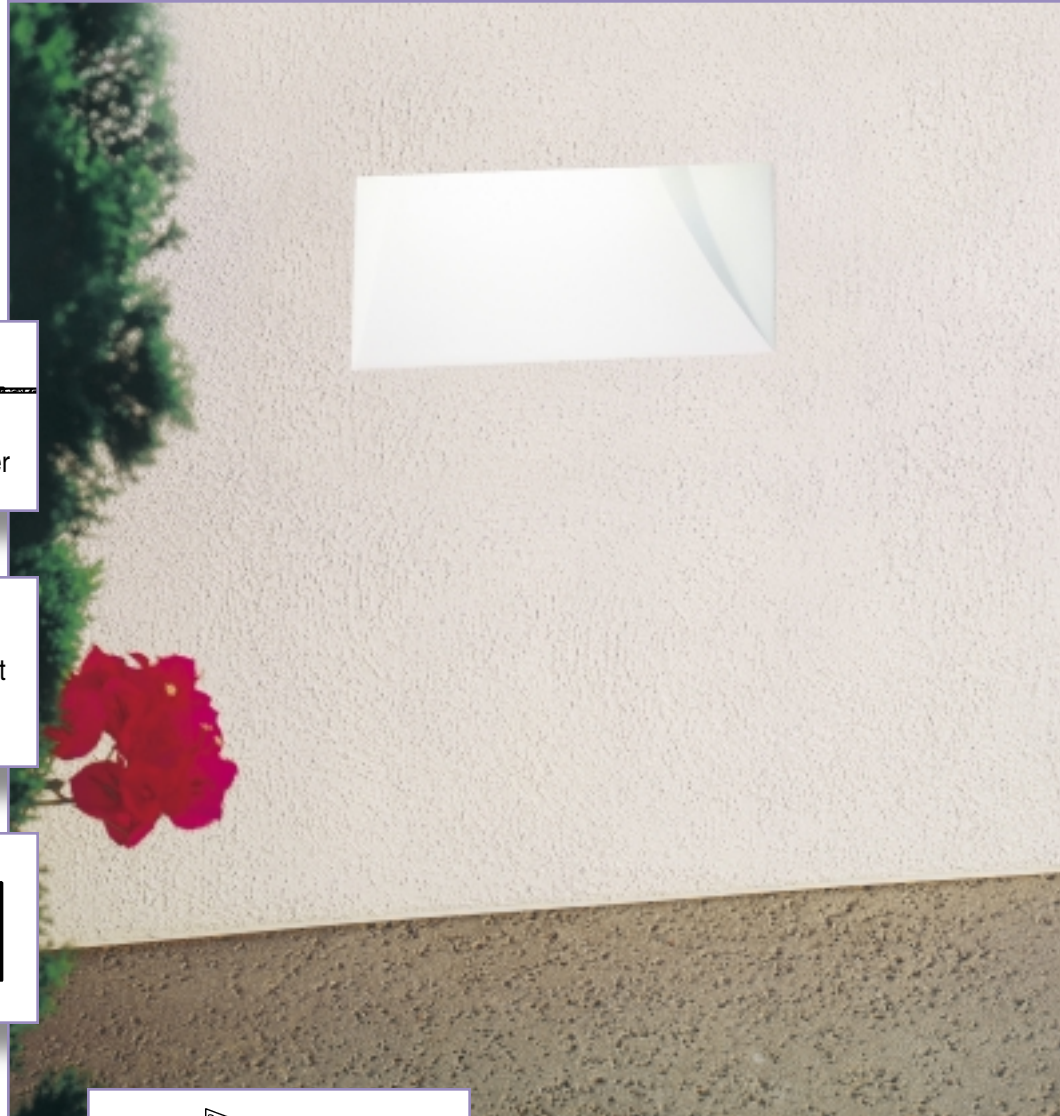
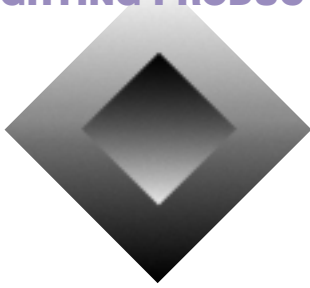
ADVANCE TRANSFORMER CO.

O'HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018
 Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 630-307-3071
 Corporate Offices: Phone: 800-322-2086

ENGINEERED
LIGHTING PRODUCTS

HITW-EX SERIES

RECESSED Hole In The Wall Light Niche
For Exterior Stucco Construction



*Ideal placement is
18" to 30" from the
bottom edge of
fixture to the ground.*

HITW-EX SERIES

RECESSED Hole In The Wall Light Niche
For Exterior Stucco Construction

SYSTEM

Recessed, fiberglass reinforced, composite fixture for use in exterior stucco construction. The cast fixture appears to be part of the architecture and looks like a custom formed "light niche" that blends with any exterior motif. Non I.C. Rated.

UL/CUL Wet Location listed.

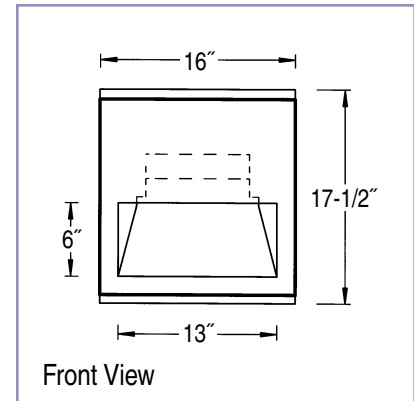
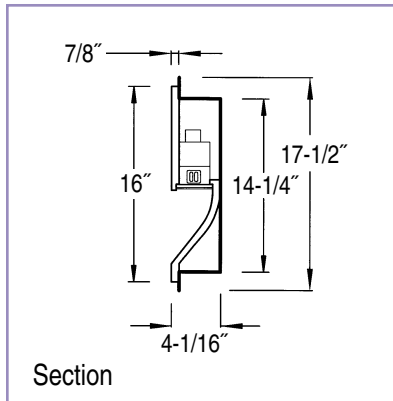
SPECIFICATIONS

Recessed fixture for use with a 20 watt Incandescent, 13 watt PL, or 26 watt Quad lamp. The cast fixture houses a ballast box with heat sink that includes wiring, socket, ballast and reflector. Incandescent fixture also has thermal protector. Fluorescent fixtures provide knock-outs for through wiring. Casting is secured to the 20 gauge electro-plated galvanized steel fixture back box and a 18 gauge electro-plated galvanized steel frame with lexan lens and silicone gaskets seal the lamp compartment.

Frame, ballast box, and fixture back box are TGIC polyester powder coated. Composite casting is water and high impact resistant. Use "Weld-crete" to finish surface to match exterior stucco.

OPTIONS

Ballast Low Temp 120 HPF Electronic (Standard)
Low Temp 277 HPF Electronic



Model No.	Lamp
120 IN-HITW-EX	20 watt Mini Can Incandescent
113 PL-HITW-EX	13 watt PL
126 QD-HITW-EX	26 watt Quad

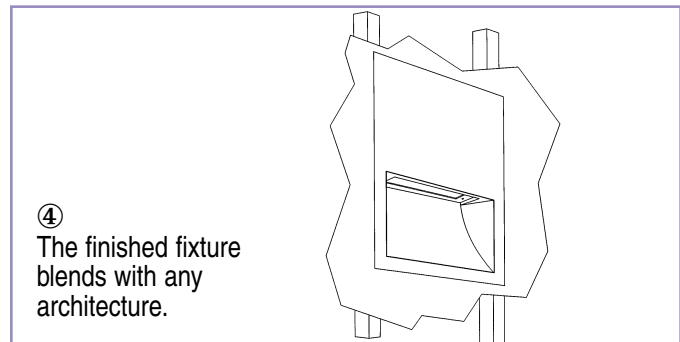
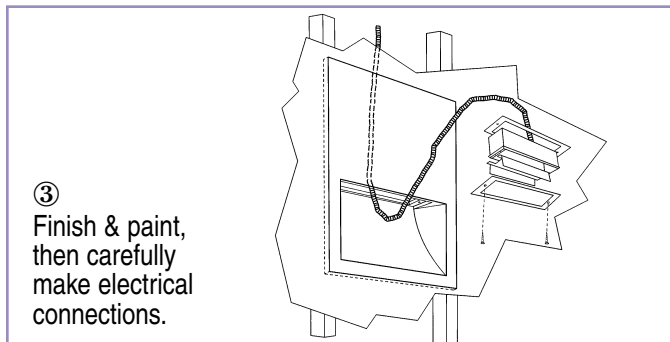
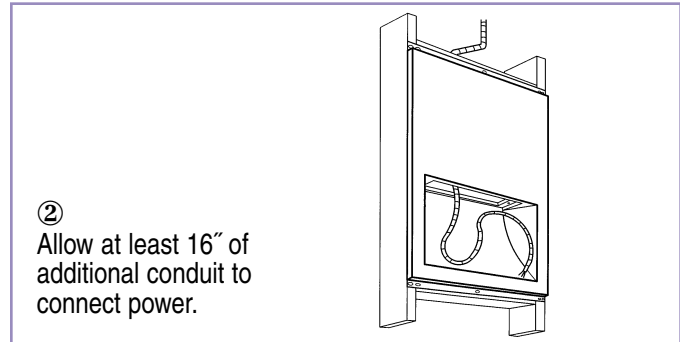
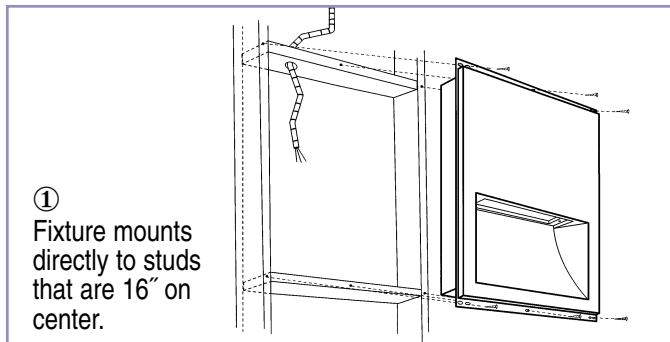
NOTE: All fluorescent fixtures have electronic ballast with -20° starting temperature.

32W Triple Tube,
consulted
manufacturer.

Installation should be coordinated between electrician and exterior finish contractor.

The exterior finish contractor must provide waterproof seal where fixture joins the building.

See Installation Instructions.





PL-T Triple 4-Pin Fluorescent Lamp

Feature	High color rendering, high efficacy lamps feature 4-pin base for use with preheat, rapid start, electronic and dimming circuits. Featuring ALTO [®] Lamp Technology
Watts	32
Bulb	PL-T
Base	GX24q-3
Product Number	046677-26832-6
Ordering Code	PL-T 32W/830/4P/ALTO
Generic Designation	CFTR32W/GX24q/830
Package Quantity	12
Description	3000K
CRI	82
Avg. Hrs. Life	10,000
Design Lumens	2040
M.O.L.	5 5/8
Lumens	2400



Images

- + [ALTO Product Logo](#)
- + [Family Photo](#)
- + [Product Photo](#)

Literature

- + [ALTO Family Brochure](#)
- + [MSDS S08-98001](#)

Other Information

- Energy Saving Product
- + [Printable Page](#)
- + [View Compatible Ballasts](#)
- + [Send this Link](#)
- + [Bookmark this Page](#)

Footnotes

- + This Product Contains Amalgam
- + High Color Rendering Lamp
- + Features **ALTO**[®] Lamp Technology
- + Rated average life under specified test conditions with Programmed Start ballasts with lamps turned off and restarted no more frequently than once every 3 operating hours. Lamp life is appreciably longer if lamps are started less frequently.

+ Approximate Initial Lumens. The lamp lumen output is based upon lamp performance after 100 hours of operating life, when the output is measured during operation on a reference ballast under standard laboratory conditions.

+ Design Lumens are the approximate lamp lumen output at 40% of the lamp's Rated Average Life. This output is based upon measurements obtained during lamp operation on a reference ballast under standard laboratory conditions.

Information for this product last modified on September 25, 2001

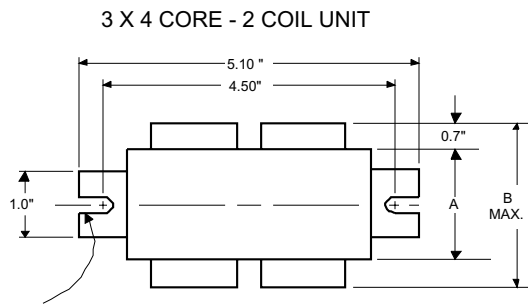
©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. [Privacy policy](#)
[Philips](#). Access to and use of this Web Site is subject to these [Terms of use](#).



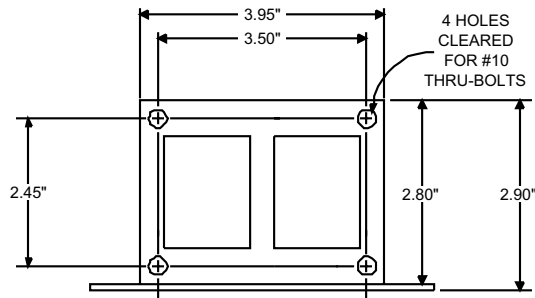
Metal Halide Lamp Ballast

Catalog Number 71A5282
For 70W M98/M143
60 Hz HX-HPF
Status: Active

DIMENSIONS AND DATA



0.25" WIDE
2 SLOTS



INPUT VOLTS	120	277			
CIRCUIT TYPE	HX-HPF				
POWER FACTOR (min)	90%				
REGULATION					
Line Volts	±5%				
Lamp Watts	±7%				
LINE CURRENT (Amps)					
Operating.....	0.80	0.35			
Open Circuit.....	1.90	0.80			
Starting.....	0.55	0.25			
UL TEMPERATURE RATINGS					
Insulation Class	H(180°C)				
Coil Temperature Code	1029				
MIN. AMBIENT STARTING TEMP.	-20°F or -30°C				
NOM. OPEN CIRCUIT VOLTAGE	255				
INPUT VOLTAGE AT LAMP DROPOUT.....	90	208			
INPUT WATTS	88				
RECOMMENDED FUSE (Amps).....	4	2			
CORE and COIL					
Dimension (A)	1.45				
Dimension (B)	2.75				
Weight (lbs.)	5				
Lead Lengths	12"				
CAPACITOR REQUIREMENT					
Microfarads	8.0				
Volts (min.)	280				
Fault Current Withstand (amps)	280				
60 Hz TEST PROCEDURES (Refer to Advance Test Procedure for HID Ballasts - Form 1270)					
High Potential Test (Volts)					
1 minute	2000				
2 seconds	2500				
Open Circuit Voltage Test (Volts)	230-280				
Short-Circuit Current Test (Amps)	0.95-1.25				
Secondary Current	0.55	0.25	-	-	-
Input Current.....	0.80	0.45			

Capacitor: 7C080L33-R



Capacitance: 8
 Dia/Oval Dim: 1.25
 Height: 2.9
 Temp Rating: 105°C

Wiring Diagram:

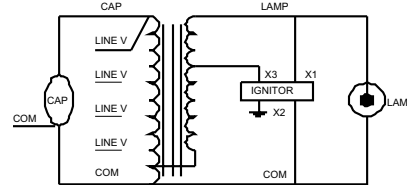


Fig. K

Ignitor: LI533-H4



Ballast to Lamp Distance (BTL) = 15 feet
 Temp Rating: 105°C

Ordering Information

Order Suffix	Description
500D.	Ballast With Ignitor and Dry Film Capacitor
510D.	Ballast w/Welded Bracket, Ignitor, & Dry Film Capacitor
600.	Ballast and Ignitor, No Capacitor
610.	Ballast with Welded Bracket and Ignitor, No Capacitor

Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice.

ADVANCE TRANSFORMER CO.

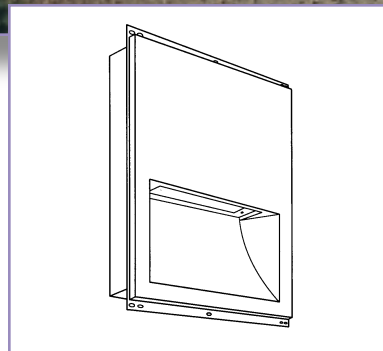
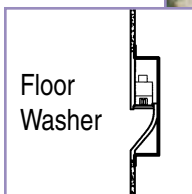
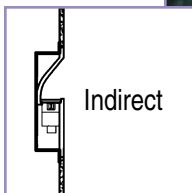
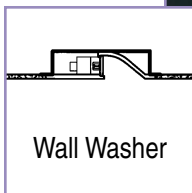
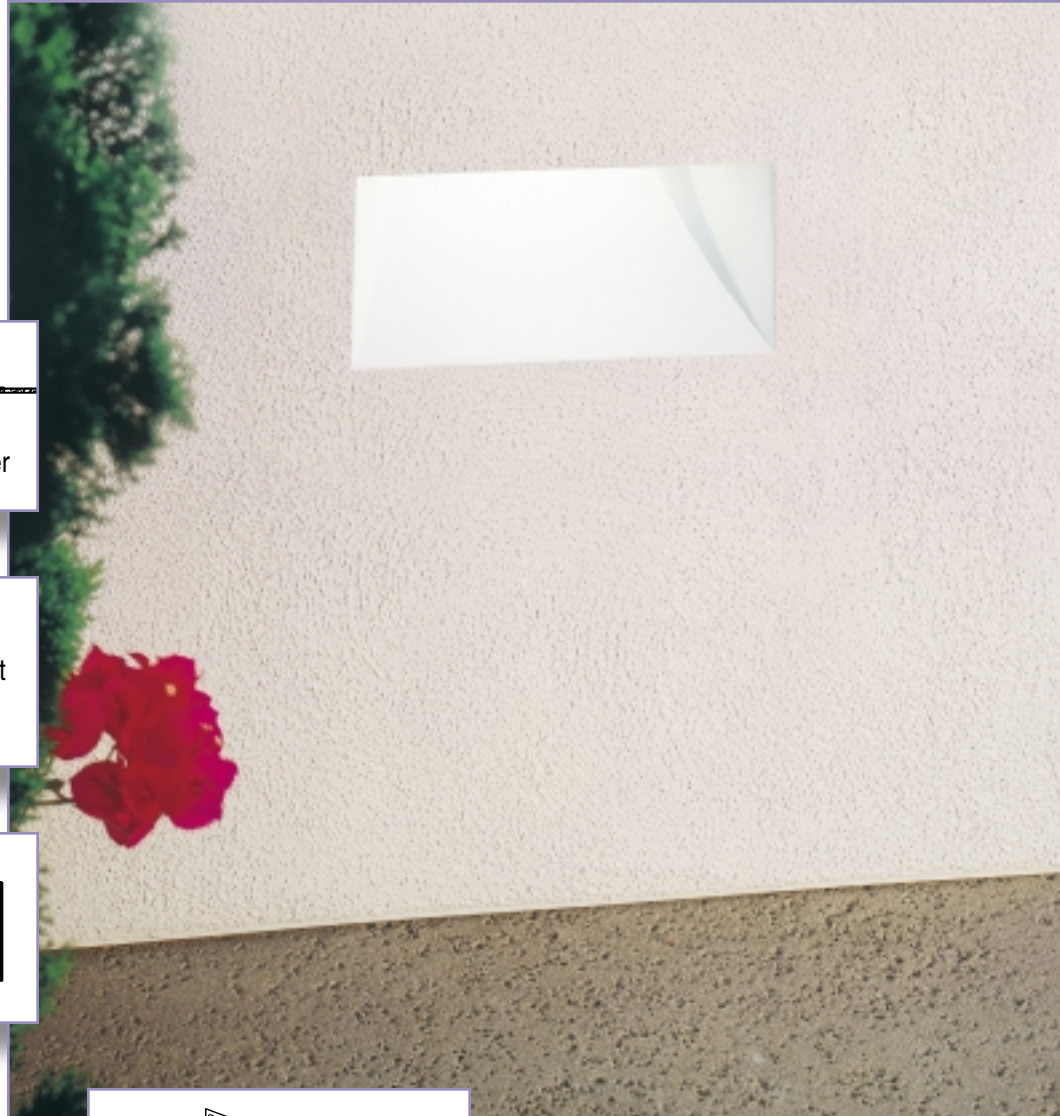
O'HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018
 Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 630-307-3071
 Corporate Offices: Phone: 800-322-2086

11/08/00

ENGINEERED
LIGHTING PRODUCTS

HITW-EX SERIES

RECESSED Hole In The Wall Light Niche
For Exterior Stucco Construction



*Ideal placement is
18" to 30" from the
bottom edge of
fixture to the ground.*

HITW-EX SERIES

RECESSED Hole In The Wall Light Niche
For Exterior Stucco Construction

SYSTEM

Recessed, fiberglass reinforced, composite fixture for use in exterior stucco construction. The cast fixture appears to be part of the architecture and looks like a custom formed "light niche" that blends with any exterior motif. Non I.C. Rated.

UL/CUL Wet Location listed.

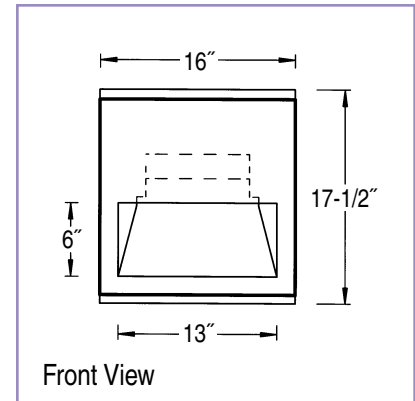
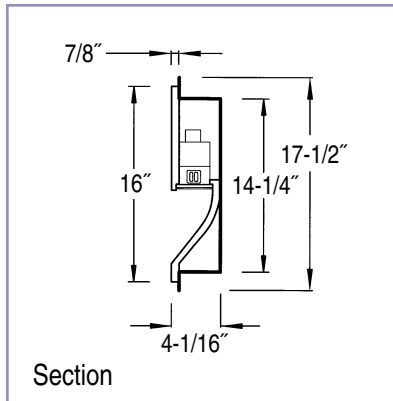
SPECIFICATIONS

Recessed fixture for use with a 20 watt Incandescent, 13 watt PL, or 26 watt Quad lamp. The cast fixture houses a ballast box with heat sink that includes wiring, socket, ballast and reflector. Incandescent fixture also has thermal protector. Fluorescent fixtures provide knock-outs for through wiring. Casting is secured to the 20 gauge electro-plated galvanized steel fixture back box and a 18 gauge electro-plated galvanized steel frame with lexan lens and silicone gaskets seal the lamp compartment.

Frame, ballast box, and fixture back box are TGIC polyester powder coated. Composite casting is water and high impact resistant. Use "Weld-crete" to finish surface to match exterior stucco.

OPTIONS

Ballast Low Temp 120 HPF Electronic (Standard)
Low Temp 277 HPF Electronic



Model No.	Lamp
120 IN-HITW-EX	20 watt Mini Can Incandescent
113 PL-HITW-EX	13 watt PL
126 QD-HITW-EX	26 watt Quad

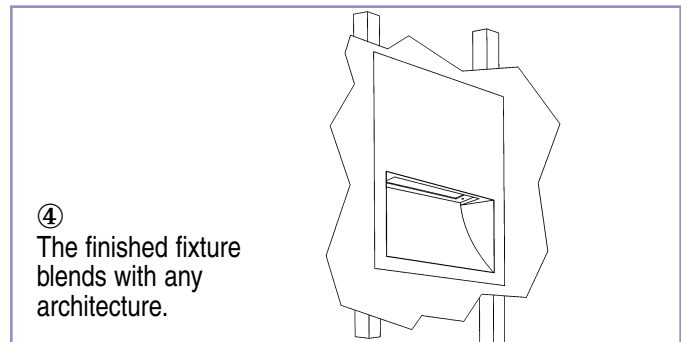
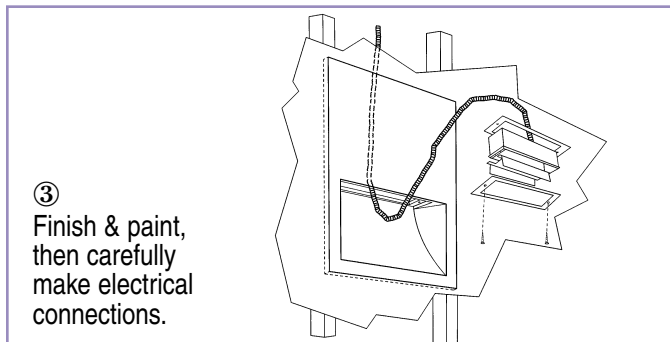
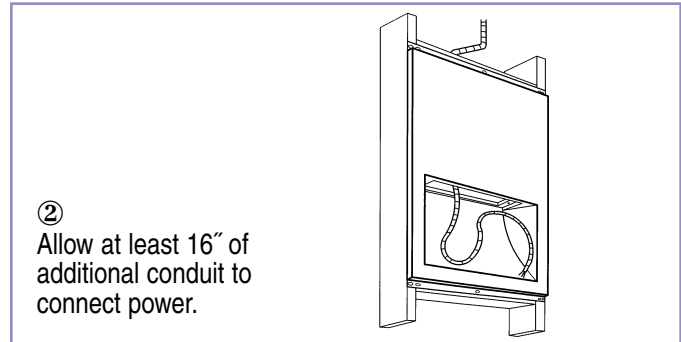
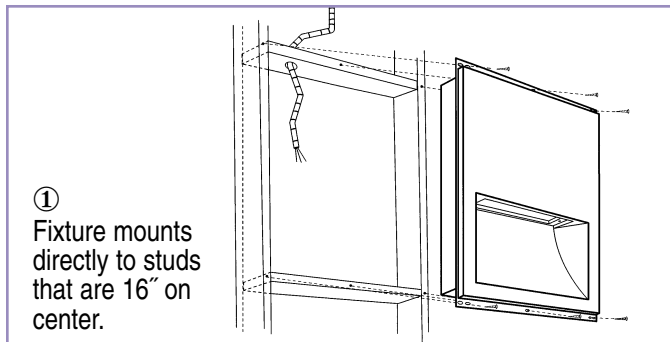
NOTE: All fluorescent fixtures have electronic ballast with -20° starting temperature.

Installation should be coordinated between electrician and exterior finish contractor.

The exterior finish contractor must provide waterproof seal where fixture joins the building.

See Installation Instructions.

32W Triple Tube, consulted manufacturer.





PL-T Triple 4-Pin Fluorescent Lamp

Feature	High color rendering, high efficacy lamps feature 4-pin base for use with preheat, rapid start, electronic and dimming circuits. Featuring ALTO [®] Lamp Technology
Watts	32
Bulb	PL-T
Base	GX24q-3
Product Number	046677-26832-6
Ordering Code	PL-T 32W/830/4P/ALTO
Generic Designation	CFTR32W/GX24q/830
Package Quantity	12
Description	3000K
CRI	82
Avg. Hrs. Life	10,000
Design Lumens	2040
M.O.L.	5 5/8
Lumens	2400



Images

- + [ALTO Product Logo](#)
- + [Family Photo](#)
- + [Product Photo](#)

Literature

- + [ALTO Family Brochure](#)
- + [MSDS S08-98001](#)

Other Information

- Energy Saving Product
- + [Printable Page](#)
- + [View Compatible Ballasts](#)
- + [Send this Link](#)
- + [Bookmark this Page](#)

Footnotes

- + This Product Contains Amalgam
- + High Color Rendering Lamp
- + Features **ALTO**[®] Lamp Technology
- + Rated average life under specified test conditions with Programmed Start ballasts with lamps turned off and restarted no more frequently than once every 3 operating hours. Lamp life is appreciably longer if lamps are started less frequently.

+ Approximate Initial Lumens. The lamp lumen output is based upon lamp performance after 100 hours of operating life, when the output is measured during operation on a reference ballast under standard laboratory conditions.

+ Design Lumens are the approximate lamp lumen output at 40% of the lamp's Rated Average Life. This output is based upon measurements obtained during lamp operation on a reference ballast under standard laboratory conditions.

Information for this product last modified on September 25, 2001

©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. [Privacy policy](#)
[Philips](#). Access to and use of this Web Site is subject to these [Terms of use](#).

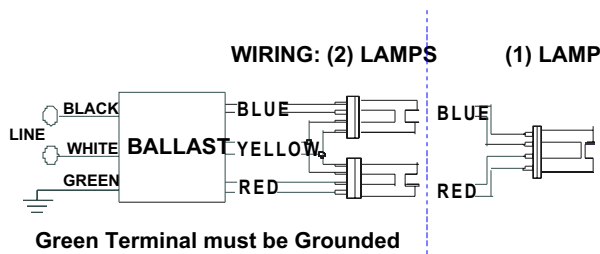


ICF-2S26-H1-LD@120	
Brand Name	SMARTMATE
Ballast Type	Electronic
Starting Method	Programmed Start
Lamp Connection	Series
Input Voltage	120-277
Input Frequency	50/60 HZ
Status	Active

Electrical Specifications

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Input Power (ANSI Watts)	Ballast Factor	MAX THD %	Power Factor	MAX Lamp Current Crest Factor	B.E.F.
CFM26W/GX24Q	1	26	0/-18	0.24	29	1.10	10	0.98	1.5	3.79
CFM26W/GX24q	2	26	0/-18	0.45	54	1.00	10	0.99	1.5	1.85
* CFM32W/GX24q	1	32	0/-18	0.31	36	0.98	10	0.98	1.5	2.72
CFM42W/GX24q	1	42	0/-18	0.38	46	0.98	10	0.98	1.5	2.13
CFQ26W/G24q	1	26	0/-18	0.23	27	1.00	10	0.98	1.5	3.70
CFQ26W/G24q	2	26	0/-18	0.43	51	1.00	10	0.99	1.5	1.96
CFS21W/GR10q	2	21	0/-18	0.42	51	1.12	10	0.99	1.5	2.20
FT24W/2G11	2	24	0/-18	0.41	48	0.93	10	0.99	1.5	1.94

Wiring Diagram

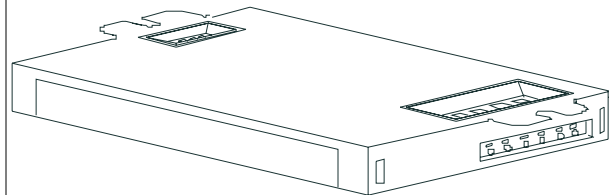


The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.		in.	cm.
Black	0.0		Yellow/Blue		
White	0.0		Blue/White		
Blue	0.0		Brown		
Red	0.0		Orange		
Yellow	0		Orange/Black		
Gray			Black/White		
Violet			Red/White		

Enclosure



Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
4.98 "	2.4 "	1.0 "	4.6 "
4 49/50	2 2/5	1	4 3/5
12.6 cm	6.1 cm	2.5 cm	11.7 cm

Revised 09/02/2004



Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

ADVANCE TRANSFORMER CO.

O'HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018
 Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 630-307-3071
 Corporate Offices: Phone: 800-322-2086



ICF-2S26-H1-LD@120	
Brand Name	SMARTMATE
Ballast Type	Electronic
Starting Method	Programmed Start
Lamp Connection	Series
Input Voltage	120-277
Input Frequency	50/60 HZ
Status	Active

Electrical Specifications

Notes:

Section I - Physical Characteristics

- 1.1 Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.
- 1.2 Ballast shall be available in a plastic/metal can or all metal can construction to meet all plenum requirements.
- 1.3 Ballast shall be provided with poke-in wire trap connectors color coded per ANSI C82.11.

Section II - Performance Requirements

- 2.1 Ballast shall be Programmed Start except for ballasts with -QS suffix, which shall be Rapid Start.
- 2.2 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.3 Ballast shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency) with no damage to the IntelliVolt ballast. RCF models shall operate from 60 Hz input source of 120V with sustained variations of +/- 10% (voltage and frequency) with no damage to the ballast.
- 2.4 Ballast shall be high frequency electronic type and operate lamps at a frequency above 42 kHz to avoid interference with infrared devices and eliminate visible flicker.
- 2.5 Ballast shall have a Power Factor greater than 0.98 for primary lamp.
- 2.6 Ballast shall have a minimum ballast factor of 1.00 for primary lamp application.
- 2.7 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less in accordance with lamp manufacturer recommendations.
- 2.8 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage with primary lamp.
- 2.9 Ballast shall have a Class A sound rating.
- 2.10 Ballast shall have a minimum starting temperature of -18C (0F) for primary lamp. Ballasts for PL-H lamps shall have a minimum starting temperature of -30C (-20F) for primary lamp.
- 2.11 Ballast shall provide Lamp EOL Protection Circuit which meets NEMA recommendations.
- 2.12 Ballast shall tolerate sustained open circuit and short circuit output conditions without damage.

Section III - Regulatory Requirements

- 3.1 Ballast shall not contain any Polychlorinated Biphenyl (PCB).
- 3.2 Ballast shall be Underwriters Laboratories (UL) listed, Class P and Type 1 Outdoor; and Canadian Standards Association (CSA) certified where applicable.
- 3.3 Ballast shall be Underwriters Laboratories (UL) rated for use in air-handling spaces.
- 3.4 Ballast shall comply with ANSI C62.41 Category A for Transient protection.
- 3.5 Ballast shall comply with ANSI C82.11 where applicable.
- 3.6 Ballast shall comply with the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated) except for RCF models which shall be Consumer (Class B).

Section IV - Other

- 4.1 Ballast shall be manufactured in a factory certified to ISO 9002 Quality System Standards.
- 4.2 Ballast shall carry a five-year warranty from date of manufacture against defects in material or workmanship, including replacement, for operation at a maximum case temperature of 75C and three-years for a maximum case temperature of 85C (90C 3year warranty for ICF1H120-XX-XX, ICF2S70-XX-XX and ICF2S4290C-XX-XX modesls).
- 4.3 Manufacturer shall have a fifteen-year history of producing electronic ballasts for the North American market.
- 4.4 Ballast shall be Advance Transformer part # _____ or approved equal.

Revised 09/02/2004



Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.


ADVANCE TRANSFORMER CO.

O'HARE INTERNATIONAL CENTER - 10275 WEST HIGGINS ROAD
 ROSEMONT, ILLINOIS 60018
 TELEPHONE: (847) 390-5000 FAX: (847) 390-5109

CLM Series

CLM Series delivers low voltage linear lighting for outdoor applications such as building facades, signage, pedestrian walkways and landscape accenting. The small scale shallow profile aluminum extrusion houses Clikstrip™ and offers many options for outdoor as well as indoor lighting.

Features

- Gasketed aluminum housing finished in satin anodized or painted. Blends well in all architectural environments.
- Gasketed stamped aluminum end plates maintain a water resistant enclosure.
- Extruded aluminum lens clasps, patent pending. Permits servicing of the fixture by removing the lens without tools. Consult factory for tamper-proof option.
- UV-protected clear polycarbonate lens.
- Choice of mounting provides installation flexibility.
- Choice of shielding options. 
- Delivered from factory with Clikstrip™ installed – order separately.
- Optional factory-installed parabolic lamp reflectors.
- Requires remote power supply.
- UL/c Listed wet location and IP64 rated for use with 10 watt max lamps in base up or base down position.

**UV-protected lens****Extruded lens clasps****Gasketed aluminum housing****Gasketed end plates**

CLM Series
Clikstrip™ miniature wet location

CLM Series is delivered with factory installed Clikstrip™ which must be ordered separately

Ardee's Clikstrip™ product specification formula allows you to specify each component that will best achieve the lighting results you need. To specify a complete catalog number choose one item from the selection available in each module.



CLX	O	X	X	XX	X	X	-X	C	X	X
Series	Mounting	Color	Clip Type	Nominal Length	Unit of Measurement	Center-to-Center Lamp Spacing	Festoon Lamp Type*	Lamp Style	Lamp Voltage	Lamp Wattage
CLX - TB for wiring in CLM Series housing	O - mounted to CLM Series housing	W - white B - black	C - standard profile chrome G - standard profile gold N - high profile chrome R - high profile gold	standard sizes in 1' increments from 01' to 16' or half meter increments from 0.5 to 4.5 meters 08'	F - feet M - metric	S - standard 17/8" o.c. A - alternate 33/4" o.c. C - custom (O.C. dimension to be called out in product description)	I - incandescent X - xenon A - argon L - looped W - LED element	C - clear F - frosted R - red B - blue G - green Y - yellow W - solar blue or LED element	2 - 12 volt 4 - 24 volt	3 - 3 watt 5 - 5 watt 6 - 6 watt 8 - 8.5 watt 1 - 10 watt A - LED element AC D - LED element DC

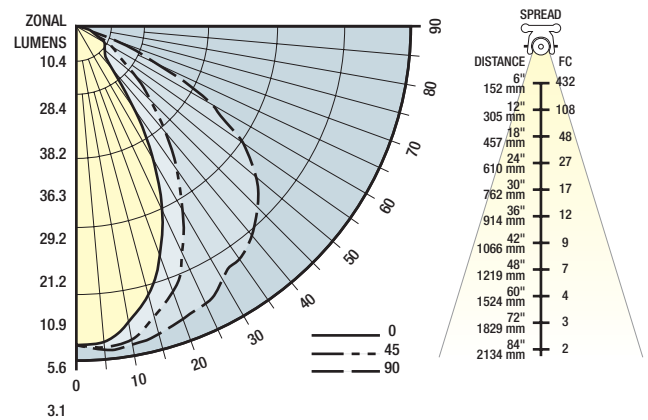
Clikstrip™ LED Element



LEDs are the newest choice of designers for energy efficient, low maintenance lighting applications. Our LED Elements combine energy efficiency and long life with low heat generation and high light intensity in a "lamp" specially designed to install into Clikstrip.™ White LED elements are standard but other colors are available for custom applications.

Features

- LED lamp color: 5000°K. LED lamp life: 60,000 hours. Consult factory for LED lamp color options.
- Total power consumption: 1 watt.
- Patent pending.



Photometric report: WW2D

Test report number: 11729.0
 Description: 18 1-watt white LED elements installed on 3' Clikstrip
 12 volt DC power supply
 Rated lumens: 10.2 per element

Ordering information

Part Numbers	Description
WW2A	White LEDs 12 VAC
WW4A	White LEDs 24 VAC
WW2D	White LEDs 12 VDC Class II only



actual size

Clikstrip™ Materials Specification

extrusion UL/C recognized PES (polyethersulfone) with a thermal deflection temperature of 397°F.

conductors Solid hard drawn copper.

terminal block UL/C recognized part made with nylon (insulator polyamide) casing with nickel-plated brass contacts.

lampholder clips Tempered spring steel finished in bright nickel or gold.

CALLISTO-12



S T E R N E R™

I N F R A N O R™

Job Name: _____

Fixture Type: _____

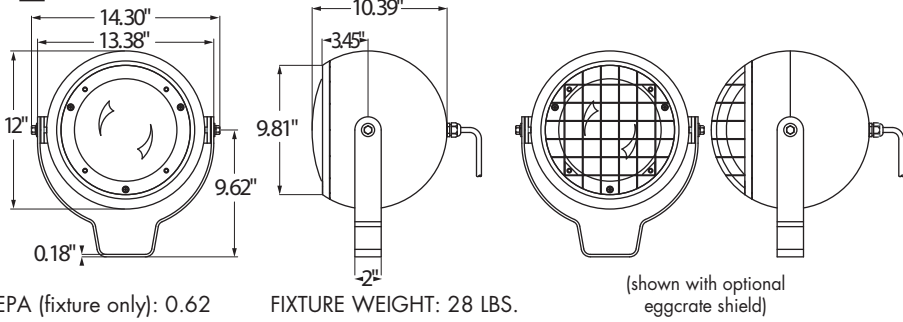
Job Number: _____

Distributor: _____

Distributor P.O. : _____

1. HOUSING

CL12



EPA (fixture only): 0.62 FIXTURE WEIGHT: 28 LBS.

Housing: two-piece die-cast aluminum with internal component mounting bosses.

Door frame: one-piece die-cast aluminum secured with three phillips head screws.

Lens assembly: various clear or prismatic glass lens (beam dependant) gasketed to door to ensure a tight seal.

The luminaire shall be cULus listed for wet locations and manufactured from UL-recognized components.

2. LAMP WATTAGE

METAL HALIDE (H.I.D.) ED17

- 70 WATT METAL HALIDE (70MH)**
- 100 WATT METAL HALIDE (100MH)
- 150 WATT METAL HALIDE (150MH)
- 175 WATT METAL HALIDE (175MH)

(Electronic ballast available only in 70MH or 100MH)

HIGH PRESSURE SODIUM (H.I.D.) ED17

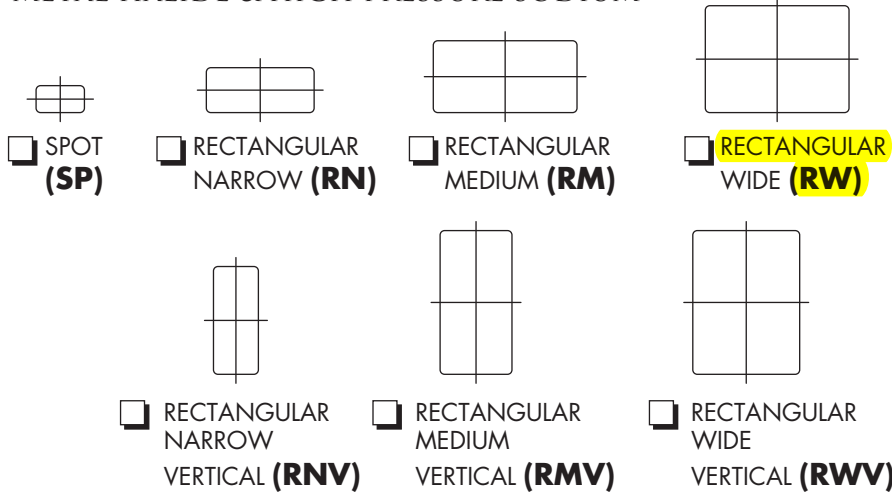
- 100 WATT HIGH PRESSURE SODIUM (100HPS)
- 150 WATT HIGH PRESSURE SODIUM (150HPS)

QUARTZ WATTAGE PAR56

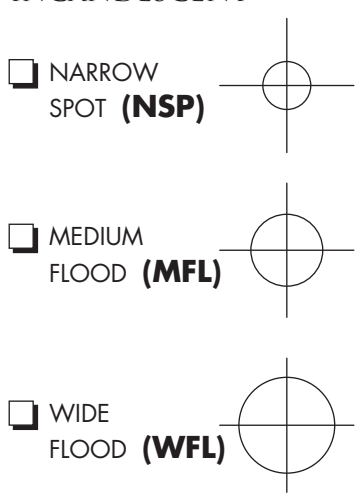
- 500 WATT QUARTZ HALOGEN (500QTZ)

3. BEAM PATTERN

METAL HALIDE & HIGH PRESSURE SODIUM



INCANDESCENT



Item Number: 1 2 3 4 5 6 7 8 9 10

ORDER NUMBER: CL12 / / / / / **YK** / / / / / /

HOUSING	LAMP WATTAGE	BEAM PATTERN	VOLTAGE	BALLAST (FOR HID)	MODEL STYLE	MOUNTING OPTION	SHIELD OPTION	FINISH	GENERAL OPTION
---------	--------------	--------------	---------	-------------------	-------------	-----------------	---------------	--------	----------------

4. VOLTAGE

- 120 277
- 208 347
- 240 480

(Electronic ballast available only in 120 or 277 volts.)
(Quartz available in 120 volt only.)

5. BALLAST (H.I.D. ONLY)

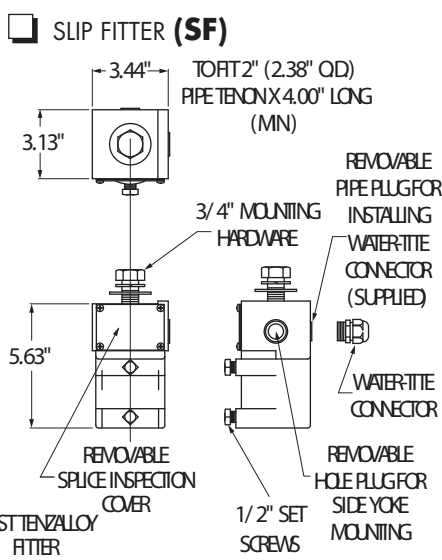
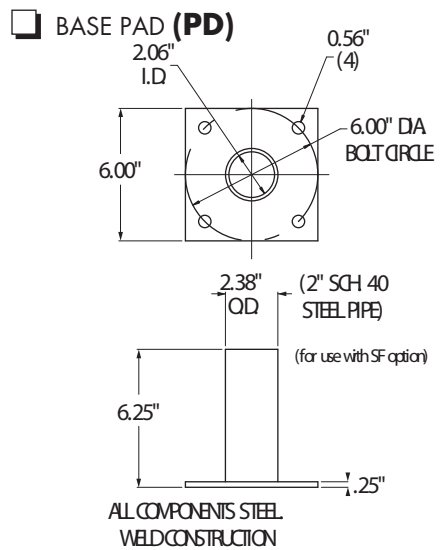
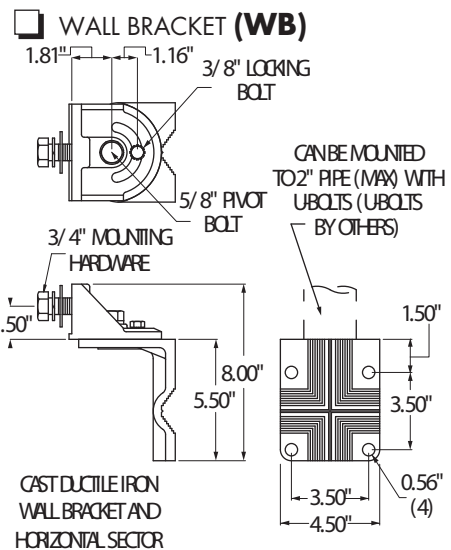
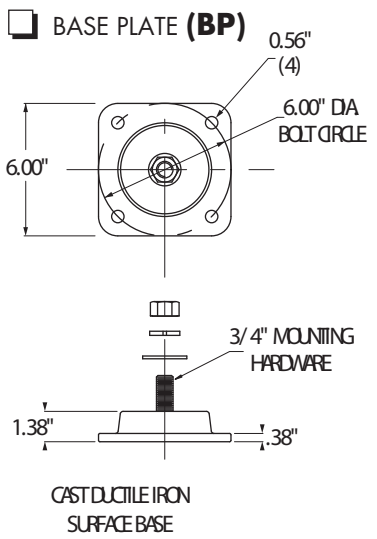
- CORE & COIL (C)
- ELECTRONIC (EB)

(Ballast is an integral part of the fixture housing.)
(Electronic ballast available only in 70WMH and 100WMH, and in 120 or 277 volt. Rated for -20 F (-28.9 C).)
(Core and coil ballast is high-power factor and rated for -20 F (-28.9 C).)

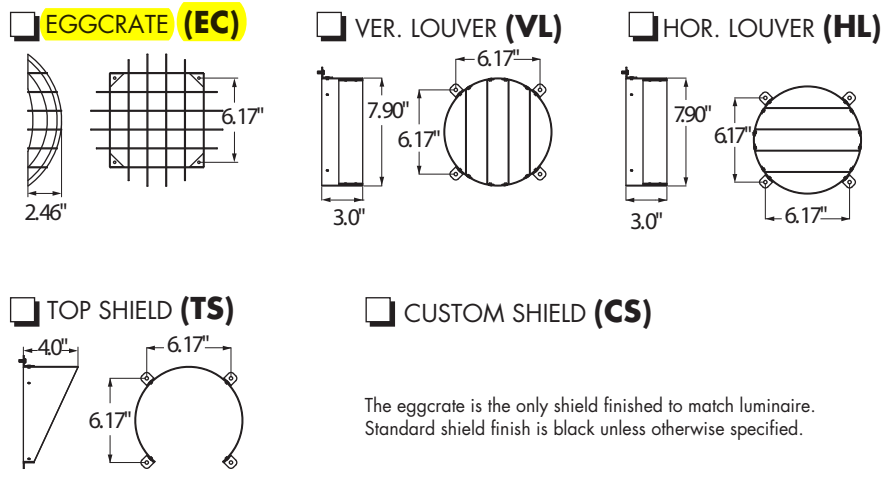
6. MODEL

- YOKE (YK)

7. MOUNTING OPTIONS



8. OPTIONAL SHIELDS



9. FINISH

- BLACK (BK)
- DARK BRONZE (BZ)
- WHITE (WH)
- NATURAL ALUMINUM (AL)
- NON-STANDARD (NS)

10. GENERAL OPTIONS

- INCLUDE LAMP (LP)**
(SELECT 'LP' ONLY IF A LAMP IS TO BE INCLUDED)
 - 70MH ED17 100HPS ED17
 - 100MH ED17 150HPS ED17
 - 150MH ED17
 - 175MH ED17 500QTZ PAR56
- SAFETY CABLE (SC)**
- FUSE LUMINAIRE (FL)**

REMARKS:

07

PHILIPS

MasterColor CDM 70W/830 Med ED17P CL ALTO+FB

[| Save PDF](#) | [Open PDF](#)**General****PRODUCT DATA**

Product Number	233668
Full product name	MasterColor CDM 70W/830 Med ED17P CL ALTO+FB
Ordering Code	MHC70/U/MP/3K ALTO
Pack type	1 Sleeve Open End
Pieces per pack	1
Packs per case	12
Pack UPC	046677233662
EAN2US	-
Case Bar Code	50046677233667
Successor Product number	-
Wattage[W]	70W
Color Code	830 [CCT of 3000K]
Base	Med [Medium]
Bulb	ED17P [Diameter: 2.125 inch Protected]
Bulb Finish	CL [Clear]
Feature	ALTO+FB [ALTO® + FadeBlock™]
Base Information	Brass[Brass Base]
Bulb Material	Hard Glass
Execution	Protected
Operating Position	Universal[Universal]
Packing Type	1SL[1 Sleeve Open End]
Packing Configuration	12
Rated Avg. Life[hr]	16000
Mercury Weight[mg]	6.6
ANSI Code HID	M143/M98/O
Lamp Voltage[V]	100
Color Rendering Index[Ra8]	85
Color Designation	Warm White
Color Temperature[K]	3000

Initial Lumens[Lm]	5900
Design Mean Lumens[Lm]	4365
Light Center Length L [inch][in]	3.438
Max Overall Length (MOL) - C[in]	5.438
Diameter D[in]	2.125

Dimensions



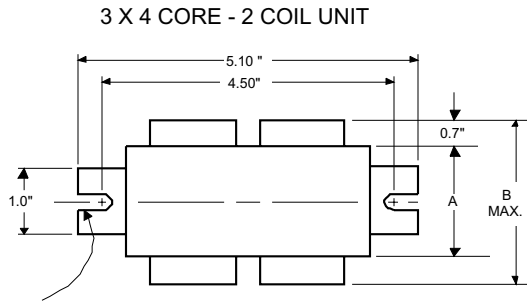
©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. [Privacy policy](#)
[Philips](#). Access to and use of this Web Site is subject to these [Terms of use](#).



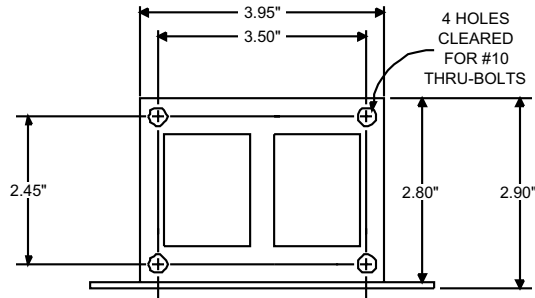
Metal Halide Lamp Ballast

Catalog Number 71A5282
For 70W M98/M143
60 Hz HX-HPF
Status: Active

DIMENSIONS AND DATA



0.25" WIDE
2 SLOTS



INPUT VOLTS	120	277			
CIRCUIT TYPE	HX-HPF				
POWER FACTOR (min)	90%				
REGULATION					
Line Volts	±5%				
Lamp Watts	±7%				
LINE CURRENT (Amps)					
Operating.....	0.80	0.35			
Open Circuit.....	1.90	0.80			
Starting.....	0.55	0.25			
UL TEMPERATURE RATINGS					
Insulation Class	H(180°C)				
Coil Temperature Code	1029				
MIN. AMBIENT STARTING TEMP.	-20°F or -30°C				
NOM. OPEN CIRCUIT VOLTAGE	255				
INPUT VOLTAGE AT LAMP DROPOUT.....	90	208			
INPUT WATTS	88				
RECOMMENDED FUSE (Amps).....	4	2			
CORE and COIL					
Dimension (A)	1.45				
Dimension (B)	2.75				
Weight (lbs.)	5				
Lead Lengths	12"				
CAPACITOR REQUIREMENT					
Microfarads	8.0				
Volts (min.)	280				
Fault Current Withstand (amps)	280				
60 Hz TEST PROCEDURES (Refer to Advance Test Procedure for HID Ballasts - Form 1270)					
High Potential Test (Volts)					
1 minute	2000				
2 seconds	2500				
Open Circuit Voltage Test (Volts)	230-280				
Short-Circuit Current Test (Amps)	230-280				
Secondary Current	0.95-1.25				
Input Current.....	0.55	0.25	-	-	-
	0.80	0.45			

Capacitor: 7C080L33-R



Capacitance: 8
 Dia/Oval Dim: 1.25
 Height: 2.9
 Temp Rating: 105°C

Wiring Diagram:

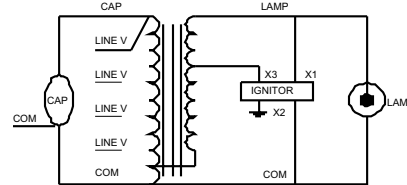


Fig. K

Ignitor: LI533-H4



Ballast to Lamp Distance (BTL) = 15 feet
 Temp Rating: 105°C

Ordering Information

Order Suffix	Description
500D.	Ballast With Ignitor and Dry Film Capacitor
510D.	Ballast w/Welded Bracket, Ignitor, & Dry Film Capacitor
600.	Ballast and Ignitor, No Capacitor
610.	Ballast with Welded Bracket and Ignitor, No Capacitor

Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice.

ADVANCE TRANSFORMER CO.

O'HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018
 Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 630-307-3071
 Corporate Offices: Phone: 800-322-2086

11/08/00

RTS – ROUND TAPERED STEEL POLES

P1

ORDER EXAMPLE

(1) (2) (3) (4) (5) (6) (7)
RTS20 / 5.9 x 3.1 / 0.120 / 28 / H / PRP / BK

ORDERING SEQUENCE

POLE CAT. NO.	DIAMETER (TAPERED)	WALL THICKNESS	MOUNTING	BASE	OPTIONS	FINISH
(1)	(2)	(3)	(4)	(5)	(6)	(7)
RTS16		0.120" ¹			PRP	BZ
RTS12 ¹	See Pole Data Table Below				DF Duplex Groundfault Receptacle (15 amp, mounted 24" above grade)	Polyurethane Finish
RTS16 ¹		10 ²		PRP Pole Top Photocell Receptacle (arm mount fixtures only)	BK Black	
RTS20 ¹		28		BN Break-Away Banner Arm Coupling (can use 0.75" or 1.25" pipe arms) (consult factory for specific ordering info.)	BZ Dark Bronze	
RTS25 ¹		29			WH White	
RTS30 ¹		32			AL Natural Aluminum	
RTS35 ¹		39			NS Non-Standard Finish (consult factory)	
RTS39 ¹		49				

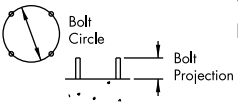
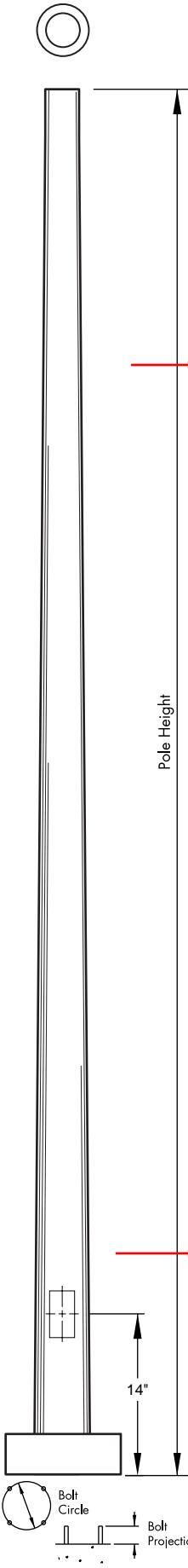
SEE FIXTURE DETAIL

NOTES:
 1) RTS12, 16, 20, 25, 30, 35, & 39 are available in 0.120" wall standard.
 2) '10' applies to both arm & yoke mount fixtures.
 3) See below table for dimensions & bolt info.

POLE DATA

Pole Cat. No.	Diameter (Tapered)	Wall Thickness	Gauge	Pole Height	Bolt Circle	Anchor Bolt Projection	Anchor Bolts	Base Style	Base Cover Dimension	Conduit Opening Diameter	Estimated Shipping Weight	Allowable Pole EPA (steady wind/gusting wind x 1.3)			
												80/104	90/117	100/130	110/143
RTS12	4.6" x 3.0"	0.120"	11 ga.	12' - 0"	9.19"	3.00"	0.75" x 16" x 2"	H	9.88" Sq. x 3.56"	4.25"	80#	22.0	17.3	13.9	10.9
RTS16	5.2" x 3.0"	0.120"	11 ga.	16' - 0"	9.19"	3.00"	0.75" x 16" x 2"	H	9.88" Sq. x 3.56"	4.75"	108#	17.1	13.3	10.5	8.5
RTS20	5.9" x 3.1"	0.120"	11 ga.	20' - 0"	9.19"	3.00"	0.75" x 16" x 2"	H	11.38" Sq. x 4.56"	5.5"	120#	18.4	14.3	11.3	9.2
RTS25	6.5" x 3.0"	0.120"	11 ga.	25' - 0"	10.0"	4.00"	1.00" x 36" x 2"	H	11.38" Sq. x 4.56"	6.0"	168#	15.8	12.2	9.6	7.7
RTS30	6.9" x 3.0"	0.120"	11 ga.	30' - 0"	10.5"	4.00"	1.00" x 36" x 4"	H	12.88" Sq. x 4.56"	6.5"	211#	13.5	10.2	7.9	6.2
RTS35	7.6" x 3.0"	0.120"	11 ga.	35' - 0"	11.0"	4.00"	1.00" x 36" x 4"	H	12.88" Sq. x 4.56"	7.25"	261#	13.6	10.3	7.9	6.3
RTS39	8.4" x 3.0"	0.120"	11 ga.	39' - 0"	12.5"	4.00"	1.00" x 36" x 4"	H	12.88" Sq. x 4.56"	8.0"	303#	13.2	9.9	7.6	6.0

NOTES: Responsibility lies with the specifier for correct pole selection based on local codes and standards for the job location. (see Wind Map on page 13 for details)




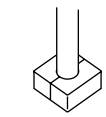
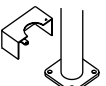
RTS – ROUND TAPERED STEEL POLES

P2

ORDER EXAMPLE

(1) (2) (3) (4) (5) (6) (7)
RTS20 / 5.9 x 3.1 / 0.120 / 28 / H / PRP / BK

ORDERING SEQUENCE

POLE CAT. NO.	DIAMETER (TAPERED)	WALL THICKNESS	MOUNTING	BASE	OPTIONS	FINISH
(1) RTS16	(2) See Pole Data Table Below	(3) 0.120" ¹	(4) 	(5) 	(6) PRP	(7) BZ
RTS12 ¹			10 ²		DF Duplex Groundfault Receptacle (15 amp, mounted 24" above grade)	BK Black
RTS16 ¹			28		PRP Pole Top Photocell Receptacle (arm mount fixtures only)	BZ Dark Bronze
RTS20 ¹			29		BN Break-Away Banner Arm Coupling (can use 0.75" or 1.25" pipe arms) (consult factory for specific ordering info.)	WH White
RTS25 ¹			32			AL Natural Aluminum
RTS30 ¹			39			NS Non-Standard Finish (consult factory)
RTS35 ¹			49			
RTS39 ¹						

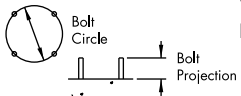
SEE FIXTURE DETAIL

NOTES:
 1) RTS12, 16, 20, 25, 30, 35, & 39 are available in 0.120" wall standard.
 2) '10' applies to both arm & yoke mount fixtures.
 3) See below table for dimensions & bolt info.

POLE DATA

Pole Cat. No.	Diameter (Tapered)	Wall Thickness	Gauge	Pole Height	Bolt Circle	Anchor Bolt Projection	Anchor Bolts	Base Style	Base Cover Dimension	Conduit Opening Diameter	Estimated Shipping Weight	Allowable Pole EPA (steady wind/gusting wind x 1.3)			
												80/104	90/117	100/130	110/143
RTS12	4.6" x 3.0"	0.120"	11 ga.	12' - 0"	9.19"	3.00"	0.75" x 16" x 2"	H	9.88" Sq. x 3.56"	4.25"	80#	22.0	17.3	13.9	10.9
RTS16	5.2" x 3.0"	0.120"	11 ga.	16' - 0"	9.19"	3.00"	0.75" x 16" x 2"	H	9.88" Sq. x 3.56"	4.75"	108#	17.1	13.3	10.5	8.5
RTS20	5.9" x 3.1"	0.120"	11 ga.	20' - 0"	9.19"	3.00"	0.75" x 16" x 2"	H	11.38" Sq. x 4.56"	5.5"	120#	18.4	14.3	11.3	9.2
RTS25	6.5" x 3.0"	0.120"	11 ga.	25' - 0"	10.0"	4.00"	1.00" x 36" x 2"	H	11.38" Sq. x 4.56"	6.0"	168#	15.8	12.2	9.6	7.7
RTS30	6.9" x 3.0"	0.120"	11 ga.	30' - 0"	10.5"	4.00"	1.00" x 36" x 4"	H	12.88" Sq. x 4.56"	6.5"	211#	13.5	10.2	7.9	6.2
RTS35	7.6" x 3.0"	0.120"	11 ga.	35' - 0"	11.0"	4.00"	1.00" x 36" x 4"	H	12.88" Sq. x 4.56"	7.25"	261#	13.6	10.3	7.9	6.3
RTS39	8.4" x 3.0"	0.120"	11 ga.	39' - 0"	12.5"	4.00"	1.00" x 36" x 4"	H	12.88" Sq. x 4.56"	8.0"	303#	13.2	9.9	7.6	6.0

NOTES: Responsibility lies with the specifier for correct pole selection based on local codes and standards for the job location. (see Wind Map on page 13 for details)



Catalog Number	
Notes	Type

FEATURES & SPECIFICATIONS

INTENDED USE

Accent lighting applications where color, extended lamp life and efficiency are important.

CONSTRUCTION

Polyester powder painted aluminum ballast housing.
 Polyester powder painted aluminum socket housing and protective cowl.
 Metal yoke rotates 330° horizontally and up to 90° from vertical.
 Two opposed knobs lock vertical position.
 Injection-molded track mounting adaptor for easy attachment to 1 or 2 circuit Lithonia Track. Available with optional direct J-box mount.
 Track mounted fixtures include a secondary locking clip.
 Available in white or black finishes.

OPTICAL SYSTEM

Optical system designed specifically for clear, medium-base metal halide lamp.
 Spun, clear anodized aluminum reflector available in spot, narrow flood or wide flood distributions.

ELECTRICAL SYSTEM

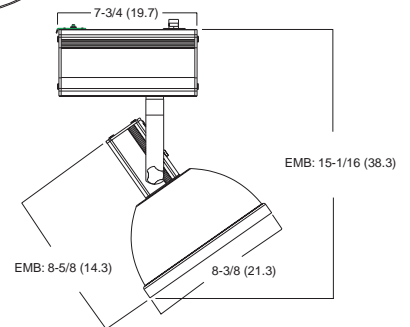
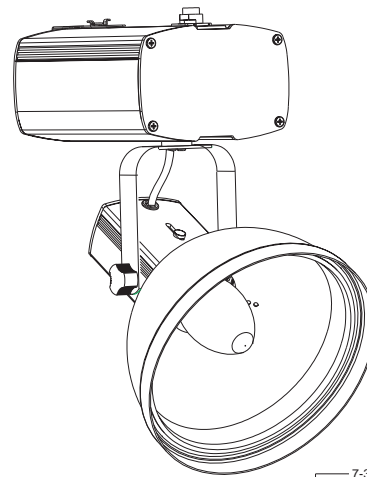
Medium-base porcelain socket with nickel-plated screw shell (open reflector requires protected lamp).
 Available for 50, 70, 100 or 150 watt metal halide lamps (see sheet 115-LTD-REFL for 50 watt, 120-LTD-REFL for 70 watt, and 125-LTD-REFL for 100 watt).
 High power factor, core and coil ballast.
 CM option provides direct J-box mount and ballast that operates with either 120 or 277 volt.

LISTING

Fixtures are UL 1574 or 1598 listed.
 Listed and labeled to comply with Canadian Standards.

H.I.D. LTD REFL

Open Reflector
 Color-Corrected or Standard Metal Halide
 ED-17, E-17 or BD-17 Lamp



All dimensions are inches (centimeters).

ORDERING INFORMATION

Example: LTD REFL 150M NFL EMB WH

Choose the boldface catalog nomenclature that best suits your needs and write it on the appropriate line.

LTD	REFL	150M					
Series	Head Style	Wattage/lamp ¹	Distribution ²	Ballast	Finish	Options	
LTD	REFL Open reflector	150M 150W metal halide	SP Spot NFL Narrow flood WFL Wide flood	EMB Electromagnetic ballast	WH White DBL Black	CM ⁴ For direct mount to 4" octagon J-box (by others) CGL Clear tempered glass lens WLP ³ With lamp (shipped separately)	

NOTES:

- Supplied with socket designed for protected lamp unless CGL option is selected.
- Available with clear anodized finish only.
- Philips ceramic metal halide lamp shipped standard. Consult factory for other lamp options.
- CM option with EMB ballast uses 120/277 dual tap ballast.

LTD REFL Open Reflector/Color Corrected or Standard Metal Halide

Distribution curve	Distribution data	Output data	Coefficient of utilization	lluminance Data at 30" Above Floor for a Single Luminaire									
LTD REFL 150M SP, (1) MHC150/U/MP/4K, 12400 lumens per lamp, 0.13 s/mh, test no. LTL8975													
	From 0°	cp. Lumens	Zone Lumens %lamp	pf pc pv	80% 50% 30%	20% 70% 50% 30%	50% 50% 30%	50% beam angle 7.5°	10% beam angle 16.6°				
	0°	206295	0°-30° 6529.9 52.7	1	84 83	83 81	80 78	Mount height	Initial fc at beam center	Beam diameter	fc at beam edge	Beam diameter	fc at beam edge
	5°	66831 4860	0°-40° 7263.6 58.6	2	79 76	78 75	75 73	8'	6819.7	0.7	3409.8	1.6	682.0
	15°	3082 1094	0°-60° 9107.5 73.4	3	75 71	74 71	72 69	10'	3667.5	1.0	1833.7	2.2	366.7
	25°	1279 576	0°-90° 9412.5 75.9	4	71 67	70 67	69 66	12'	2285.8	1.2	1142.9	2.8	228.6
	35°	1138 734	90°-180° 0.0 0.0	5	68 64	67 64	66 63	14'	1559.9	1.5	779.9	3.4	156.0
	45°	1885 1311	0°-180° 9412.5 75.9*	6	65 61	65 61	63 60	16'	1131.9	1.8	566.0	3.9	113.2
	55°	397 533	*Efficiency	7	63 59	62 59	61 58						
	65°	142 136		8	61 57	60 57	60 56						
	75°	76 117		9	59 55	59 55	58 55						
	85°	13 52		10	57 54	57 54	57 54						
90°	0												

Distribution curve	Distribution data	Output data	Coefficient of utilization	lluminance Data at 30" Above Floor for a Single Luminaire									
LTD REFL 150M NFL, (1) MHC150/U/MP/4K, 12400 lumens per lamp, 0.51 s/mh, test no. LTL8976													
	From 0°	cp. Lumens	Zone Lumens %lamp	pf pc pv	80% 50% 30%	20% 70% 50% 30%	50% 50% 30%	50% beam angle 28.7°	10% beam angle 41.9°				
	0°	28913	0°-30° 7422.7 59.9	1	84 82	83 81	79 78	Mount height	Initial fc at beam center	Beam diameter	fc at beam edge	Beam diameter	fc at beam edge
	5°	31549 2769	0°-40° 8053.8 64.9	2	79 76	78 75	75 73	8'	955.8	2.8	477.9	4.2	95.6
	15°	14470 3786	0°-60° 9186.3 74.1	3	75 71	74 71	72 69	10'	514.0	3.8	257.0	5.7	51.4
	25°	1567 867	0°-90° 9363.3 75.5	4	71 67	70 67	69 66	12'	320.4	4.9	160.2	7.3	32.0
	35°	996 631	90°-180° 0.0 0.0	5	68 64	67 63	66 63	14'	218.6	5.9	109.3	8.8	21.9
	45°	983 757	0°-180° 9363.3 75.5*	6	65 61	64 61	63 60	16'	158.6	6.9	79.3	10.3	15.9
	55°	311 376	*Efficiency	7	62 58	62 58	61 57						
	65°	80 82		8	60 56	59 56	59 55						
	75°	59 58		9	58 54	57 54	57 53						
	85°	29 37		10	56 52	55 52	55 52						
90°	0												

Distribution curve	Distribution data	Output data	Coefficient of utilization	lluminance Data at 30" Above Floor for a Single Luminaire									
LTD REFL 150M WFL, (1) MHC150/U/MP/4K, 12400 lumens per lamp, 0.95 s/mh, test no. LTL8978													
	From 0°	cp. Lumens	Zone Lumens %lamp	pf pc pv	80% 50% 30%	20% 70% 50% 30%	50% 50% 30%	50% beam angle 51°	10% beam angle 94.9°				
	0°	5852	0°-30° 3944.1 31.8	1	75 73	74 72	71 69	Mount height	Initial fc at beam center	Beam diameter	fc at beam edge	Beam diameter	fc at beam edge
	5°	5845 556	0°-40° 5673.6 45.8	2	68 64	67 63	64 62	8'	193.5	5.2	96.7	12.0	19.3
	15°	5512 1528	0°-60° 8083.7 65.2	3	62 57	61 56	59 55	10'	104.0	7.2	52.0	16.3	10.4
	25°	4058 1860	0°-90° 8630.4 69.6	4	56 51	55 51	54 50	12'	64.8	9.1	32.4	20.7	6.5
	35°	2742 1729	90°-180° 0.0 0.0	5	51 46	51 446	49 45	14'	44.2	11.0	22.1	25.0	4.4
	45°	2016 1563	0°-180° 8630.4 69.6*	6	47 42	46 42	45 41	16'	32.1	12.9	16.1	29.4	3.2
	55°	814 847	*Efficiency	7	43 38	43 38	39 34						
	65°	345 346		8	40 35	40 35	39 34						
	75°	142 155		9	37 32	37 32	36 32						
	85°	43 45		10	35 30	35 30	34 30						
90°	0												

Philips MHC150/U/MP/3K has a rated lamp life of 9,000 hours.

NOTES:

- For electrical characteristics, refer to electrical data tab.
- Tested to current IES and NEMA standards under stabilized laboratory conditions. Various operating factors can cause differences between laboratory data and actual field measurements. Dimensions and specifications are based on the most current available data and are subject to change without notice.



Lithonia Lighting
Acuity Lighting Group, Inc.
Recessed Downlighting
 One Lithonia Way, Conyers, GA 30012
 Phone: 800-315-4935 Fax: 770-860-3106
 In Canada: 1100 50th Ave., Lachine, Quebec H8T 2V3
 www.lithonia.com

PHILIPS**Protected MasterColor® Ceramic Metal Halide Lamp**

Feature	PAR Style. Open or Enclosed Luminaires. Lifetime Color Stability Within +/- 200K
Watts	70
Bulb	PAR-30L
Base	Med.
Product Number	046677-23221-5
Ordering Code	CDM70/PAR30L/M/FL
Package Quantity	6
Description	G, PAR WISO Flood 40 degrees FadeBlock 10,000 MBCP
ANSI Code/Ballast Ref.	M143/M98/O
CRI	82
Rated Avg. Life (Hrs.)	9000
M.O.L.	4 3/4
Approximate Initial Lumens	4850
Approximate Mean Lumens	3880
CCT	3000

**Images**

- + [Family Photo](#)
- + [Product Logo](#)
- + [Product Photo](#)

Literature

- + [Family Brochure](#)
- + [MSDS S15-95004](#)
- + [MSDS S15-95005](#)
- + [Photometric Data](#)
- + [Technical Data Sheet](#)

Other Information

- + [Printable Page](#)
- + [View Compatible Ballasts](#)
- + [Send this Link](#)
- + [Bookmark this Page](#)
- † Heat resisting glass bulb

Footnotes

- + ANSI CODE RATING, E - Enclosed, O - Open, S - Open or Enclosed
- + Rated average life is the life obtained, on the average, from large representative groups of lamps in laboratory tests under controlled conditions at 10 or more operating hours per start. It is based on survival of at least 50% of the lamps and allows for individual lamps or groups of lamps to vary considerably from the average. For lamps with a rated average life of 24,000 hours, life is based on survival of 67% of the lamps.
- + Approximate lumen values listed are for vertical operation of the lamp.

- + [Click here for Recommended Warnings, Cautions and Operating Instructions.](#)
- + Approximate lumen output at 40% of lamp rated average life.
- + Requires a ballast specified or approved for Philips Metal Halide lamp or one designed to the indicated ANSI Standard. A pulse ignitor is required. Sockets and wiring must withstand starting pulse.
- + Supply volts must be +/- 5% of rated ballast line volts for reactor type and +/- 10% for CWA or electronic ballasts.
- + UV filtered design (Fade-Block™).
- + **MasterColor®** Metal Halide Lamps are not recommended for use on dimmers and are not warranted if used on dimmer systems.
- + Excellent color rendition - up to 92 CRI
- + Heat resisting glass bulb
- + [Click here for specific product and ordering information on this lamp.](#)

Information for this product last modified on June 22 2004.

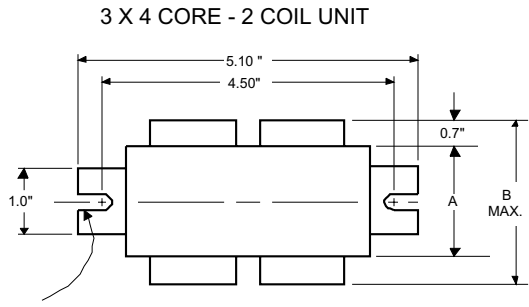
©2004-2005 Koninklijke Philips Electronics N.V. All rights reserved. [Privacy policy](#)
[Philips](#). Access to and use of this Web Site is subject to these [Terms of use](#).



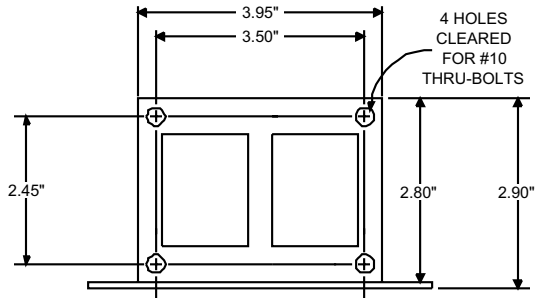
Metal Halide Lamp Ballast

Catalog Number 71A5282
For 70W M98/M143
60 Hz HX-HPF
Status: Active

DIMENSIONS AND DATA



0.25" WIDE
2 SLOTS

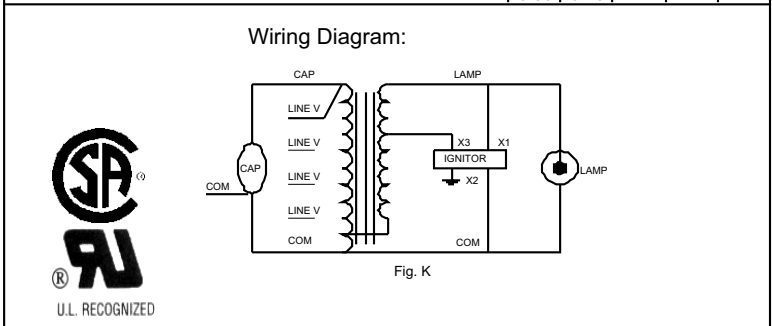


INPUT VOLTS	120	277			
CIRCUIT TYPE	HX-HPF				
POWER FACTOR (min)	90%				
REGULATION					
Line Volts	±5%				
Lamp Watts	±7%				
LINE CURRENT (Amps)					
Operating.....	0.80	0.35			
Open Circuit.....	1.90	0.80			
Starting.....	0.55	0.25			
UL TEMPERATURE RATINGS					
Insulation Class	H(180°C)				
Coil Temperature Code	1029				
MIN. AMBIENT STARTING TEMP.	-20°F or -30°C				
NOM. OPEN CIRCUIT VOLTAGE	255				
INPUT VOLTAGE AT LAMP DROPOUT.....	90	208			
INPUT WATTS	88				
RECOMMENDED FUSE (Amps).....	4	2			
CORE and COIL					
Dimension (A)	1.45				
Dimension (B)	2.75				
Weight (lbs.)	5				
Lead Lengths	12"				
CAPACITOR REQUIREMENT					
Microfarads	8.0				
Volts (min.)	280				
Fault Current Withstand (amps)	280				
60 Hz TEST PROCEDURES (Refer to Advance Test Procedure for HID Ballasts - Form 1270)					
High Potential Test (Volts)					
1 minute	2000				
2 seconds	2500				
Open Circuit Voltage Test (Volts)	230-280				
Short-Circuit Current Test (Amps)	230-280				
Secondary Current	0.95-1.25				
Input Current.....	0.55	0.25	-	-	-
	0.80	0.45			

Capacitor: 7C080L33-R



Capacitance: 8
 Dia/Oval Dim: 1.25
 Height: 2.9
 Temp Rating: 105°C



Ignitor: LI533-H4



Ballast to Lamp Distance (BTL) = 15 feet
 Temp Rating: 105°C

Ordering Information	
Order Suffix	Description
500D.	Ballast With Ignitor and Dry Film Capacitor
510D.	Ballast w/Welded Bracket, Ignitor, & Dry Film Capacitor
600.	Ballast and Ignitor, No Capacitor
610.	Ballast with Welded Bracket and Ignitor, No Capacitor

Data is based upon tests performed by Advance Transformer in a controlled environment and representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice.

ADVANCE TRANSFORMER CO.

O'HARE INTERNATIONAL CENTER · 10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018
 Customer Support/Technical Service: Phone: 800-372-3331 · Fax: 630-307-3071
 Corporate Offices: Phone: 800-322-2086



JOB: _____ T3

LOCATION: _____

DATE: _____

CATALOG: DECORATIVE D9 SUPPLEMENT 2004/05

PRODUCT SPECIFICATIONS

STYLE # D9-2016

SERIES NAME: DAU SPOT

STRUCTURE: Metal

COLOR /FINISH: ~~Brushed Aluminum~~

MATT WHITE FINISH

DIFFUSER: N/A

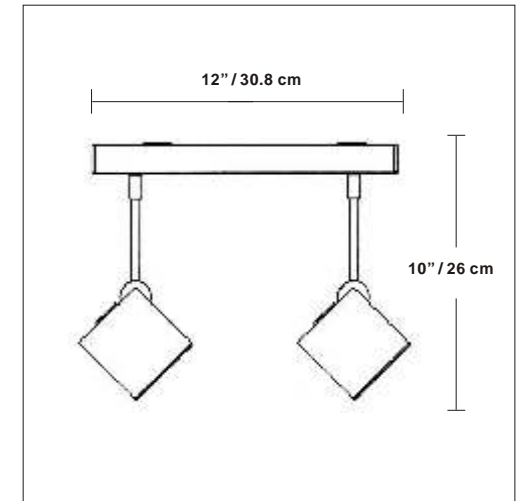
LAMP TYPE: Halogen GZ10 MR20 

MAX WATT: 2 x 75W

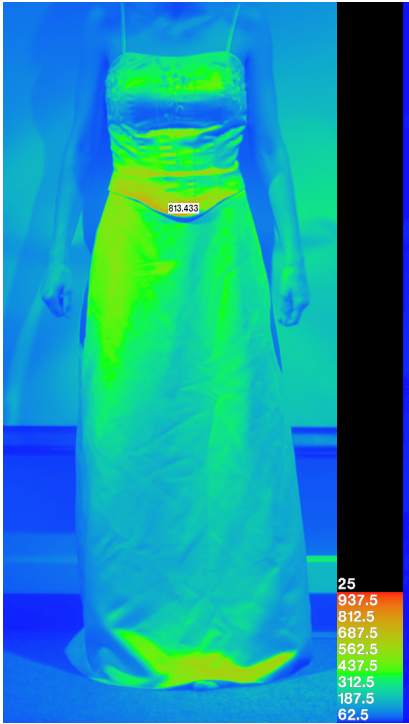
DIMENSIONS: D. 12" x Ht. 10"

APPROVALS: Approved by CSA for
North American Standards.

NOTES: _____



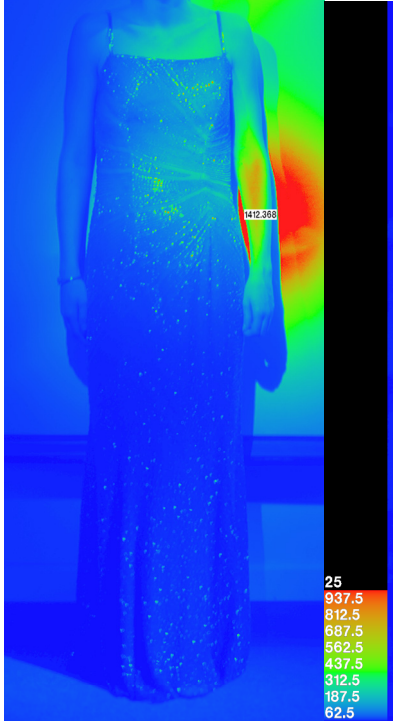
Luminaire Comparison



Metal Halide
Max/Min ratio for shadows:
2:1



Halogen
Max/Min ratio for shadows:
6:1



Halogen
**Max/Min ratio for
sparkle:**
15:1



Metal Halide
**Max/Min ratio for
sparkle:**
2:1