

Mercmaster™ LED Low Profile Luminaires

Enclosed and Gasketed Fixtures

NEC/CEC:

Class I, Division 2, Groups A,B,C,D
Class I, Zone 2, Group IIC
Class II, Division 1, Groups E,F,G
Zone 20 and 21, Group IIIC
Class II, Division 2, Groups F,G
Zone 22, Group IIIB
Class III

NEC/CEC:

Type 3R, 4, 4X
IP66
Simultaneous Exposure
Suitable for Use in Wet Locations
Marine Outside Type (Salt Water) For USA ONLY ⌘

Applications

- Enclosed and gasketed fixtures suitable for use in:
 - A wide range of industrial, chemical processing and other areas where flammable gases and vapors are present
 - Marine and wet locations
 - Areas of low clearance, low ceiling heights or where fixture weights must be minimized
- Typical applications include:
 - Pulp and paper mills
 - Processing plants
 - Chemical plants
 - Petrochemical facilities
 - Oil refineries
 - Drilling rigs
 - Foundries
 - Waste and sewage treatment
 - Mining
 - Steel mills

Features

- Compact light weight low profile design is suited for low mounting heights.
- Six standard mounting hood designs allow for mounting in any location. Uses same mounting hoods as Mercmaster III.
- Customize to the application requirements with four different globe options: clear and diffused polycarbonate, clear glass, or prismatic glass refractor.
- Three light output levels for retrofit of HID fixtures up to 150 W.
- Hinge has high lip for added safety during installation and servicing. Hinge and bolt construction assures 360° compression at all points on fixture housing gasket for positive sealing. Swing away design of captive bolt and nut simplifies servicing.
- Ambient Temperature: BU: -40 °C to +55 °C (-40 °F to +131 °F)
BH: -30 °C up to +55 °C (-22 °F up to +131 °F)
- Standard screw-type terminal block can accept UL/CSA 24-8 AWG wire.
- Standard NPT threads.
- Lamp life rated at 60,000 Hours.

Options

- Glass globe guard is stainless steel wire. Glass refractor guard is die cast aluminum with gray epoxy powder coating to match fixtures.
- All Mercmaster mounting hoods have provision for fusing; add suffix -F at the end of the catalog number. ①
- Photocontrols are available with all except ceiling and pendant cone mounting hoods, and are configured to your operating voltage. ②

Standard Materials

- Mounting hoods and bodies: cast copperfree (4/10 of 1% max.) aluminum
- All hardware and catch assemblies: stainless steel
- Globe: polycarbonate or glass
- Refractor: heat-resistant prismatic glass
- Glass globe guard: stainless steel wire
- Glass refractor guard: die cast aluminum
- Reflectors : fiberglass reinforced white polyester

① Factory Installed.

② Available for 120-277 Vac models only.

⌘ Use of fuse voids Marine Outside Type (Salt Water) rating.



Standard Finishes

- Mounting hoods, bodies and glass refractor guard: gray epoxy powder coat finish, electrostatically applied for complete uniform protection

NEC/CEC Certifications and Compliances

- UL Standard: UL 50; UL 844, UL 1598, UL 1598A, UL 8750
- CSA Standard: C22.2 No 0; C22.2 No. 94; C22.2 No. 60529; C22.2 No. 137; C22.2 No. 250.0
- ANSI/IEC Standard: 60529
- cCSAus Listed: Master contract 164460
- DLC Qualified Products Listed

Related Products

- NEC, Class I, Division 2 photocells for classified use are available, see PCD2 Series.
 - Mounting hoods with photocontrols are not rated IP66, Type 4X or Marine Outside Type (Salt Water), or rated Class II.

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Illustrated Features

Heatsink

Reliable heat transfer via the cast, epoxy powder coat aluminum body. Provides maximum heat dissipation from the LED assembly to the outside environment.



Driver Assembly

Utilizing non-sparking components avoiding the ignition of gases or vapors that may be present.

Terminal Blocks

A seven-point terminal block is provided to facilitate wiring. Terminal block accommodates wire size ranging from 24-8 AWG.

Epoxy Finish

Fixture housing, hoods and guards are copperfree aluminum with epoxy powder coat finish.

Electrical Protection

Ground wire provided to bond mounting hood to fixture housing.

"Safety" High Hinge

Extra-high hinge provides additional protection against accidental fixture housing disengagement during installation or maintenance.

Fuses (optional)

Two screws secure fuse kit to mounting boss in any Mercmaster mounting hood. Fuse included ①. Use of fuse voids Marine Outside Type (salt water) rating.

Photocell (optional)

Available for all fixtures ② except cone and ceiling mount. Provides continuous ON-OFF dusk-to-dawn control. Note: Fixtures with PCD2 photocontrols are not rated IP66, Type 4X, Marine Outside Type (Salt Water), or Class II.

Prismatic Refractors

Heat-resistant refractor threads directly into fixture housing and seal against a high-temperature silicone rubber gasket.



Reflectors

Reflectors are thick, tough fiberglass reinforced white polyester. Quickly attach with furnished stainless steel screws.



LED Chamber

Protected by polycarbonate or glass globe, allows for easy maintenance access.



Cooler Operating Cone Hood

Larger sloped surface sheds dusts, dirt and combustible fibers providing better heat dissipation.

Mounting Hood and Globe Gaskets

Silicone rubber gaskets seal out moisture, dirt and dust. Stays flexible, withstands high temperatures. Closure design assures uniform gasket compression.

Stainless Steel Latch Assembly

Captive, stainless steel latch assembly bolt and nut closes securely, resists attack of corrosive atmospheres. Swing-away design simplifies servicing.



① Factory Installed.

② Available for 120-277 Vac models only.

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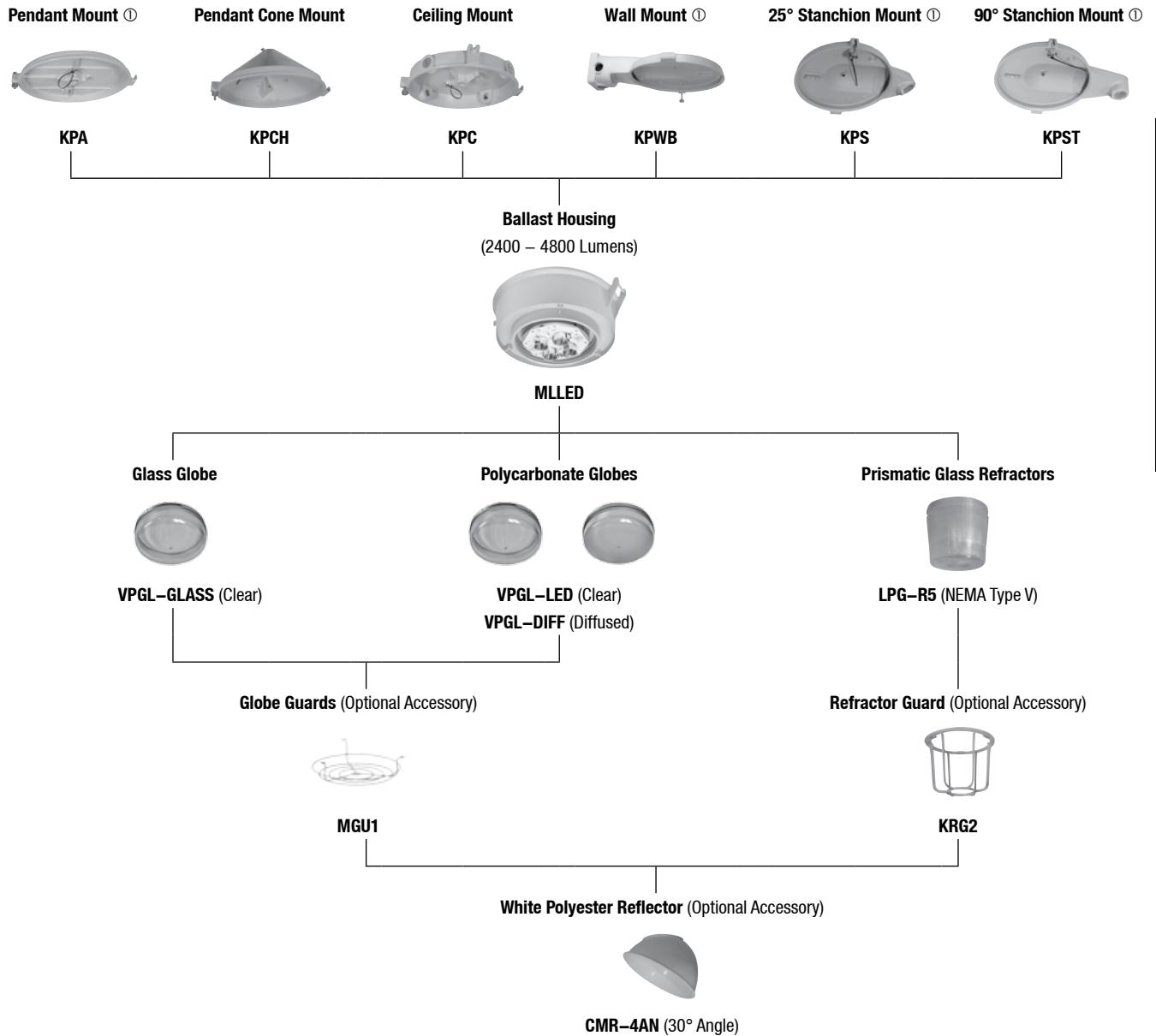
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Mercmaster LED Low Profile Family Tree



① Mounting hood with a 120 V or 208-277 V factory installed photocell is available.

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Order using catalog numbering guides below or select catalog number from tables on following pages.

Catalog Numbering Guide

For Hazardous Locations:

MLLED	A	2	2	P5	BU	1
MLLED - NEC/CEC Certified Mercmaster LED Low Profile Series		Lumen Output ⑤: 2 - 2K Lumens, 5700K CCT 3 - 3K Lumens, 5700K CCT 4 - 4K Lumens, 5700K CCT		P5- NEMA Type V Clear Polycarbonate Globe D5- NEMA Type V Diffused Polycarbonate Globe G5- NEMA Type V Glass Globe ④ J5- NEMA Type V Glass Refractor ④		Options: F - Fusing ② 1 - Photocontrol 120V ③ 2 - Photocontrol 208V ③ 3 - Photocontrol 240V ③ 4 - Photocontrol 277V ③
	Mounting: A - Pendant C - Ceiling ① D - Pendant Cone Hood ① R - 90° Stanchion S - 25° Stanchion W - Wall		Hub Size: 2 - 3/4" NPT 3 - 1" NPT 4 - 1-1/4" NPT stanchion 5 - 1-1/2" NPT stanchion		Voltage: BU - 120-277 Vac, 50/60Hz BH - 347-480 Vac, 50/60Hz	

① Ceiling and pendant cone hood mounted luminaires are not designed to use the PCD2 photocontrol. Ceiling mounts must use an FS/FD box with a photocontrol. Contact your local sales representative for more information.

② Factory installed.

③ Luminaires with photocontrol are not rated IP66, Marine Outside Type (Salt Water), or Class II. Photocontrol available for 120-277 Vac only.

④ Guards for the glass refractors and globes are ordered separately. See the Accessories for more information.

⑤ For specific lumen output information, see Lamp Comparison Chart.

⌘ Use of fuse voids Marine Outside Type (Salt Water) rating.

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Technical Data

Lamp		Ambient Temperature °C (°F)	Supply Wire Temperature °C (°F)	NEC/CEC					Gas/Dust Simultaneous ① Class I, Division 2/ Class II, Division 1
Model	Type			Class I, Division 2 ①	Gas Groups	Class I, Zone 2 Group IIC	Class II, Division 1 and 2 ②	Dust Zone 20, Group IIIC, IIIB, Group IIIA	
MLLED2BU	LED	55 (131)	90 (194)	T4A	A, B, C, D	T4	T4A	E, F, G	T4A
MLLED3BU	LED	55 (131)	90 (194)	T4A		T4	T4A		T4A
MLLED4BU	LED	55 (131)	90 (194)	T4A		T4	T4A		T4A
MLLED2BH	LED	40 (104)	90 (194)	T5	A, B, C, D	T4	T4A	E, F, G	T4A
		55 (131)	90 (194)	T4A		T4	T4A		T4A
MLLED3BH	LED	40 (104)	90 (194)	T5		T4	T4A		T4A
		50 (122)	90 (194)	T5		T4	T4A		T4A
MLLED4BH	LED	40 (104)	90 (194)	T5		T4	T4A		T4A
		55 (131)	90 (194)	T4A		T4	T4A		T4A

“T” Numbers Represent the Maximum Internal Temperature ① or Maximum Surface Temperature ②

“T” #	NEC/CEC															
	T1	350	325	T2	T2A	T2B	T2C	T2D	T3	T3A	T3B	T3C	T4	T4A	T5	T6
Temp. Range °C (°F)	351-450 (664-842)	326-350 (619-662)	301-325 (574-617)	281-300 (538-572)	261-280 (502-536)	231-260 (448-500)	216-230 (421-446)	201-215 (394-419)	181-200 (358-392)	166-180 (331-356)	161-165 (322-329)	136-160 (277-320)	121-135 (250-275)	101-120 (214-248)	86-100 (187-212)	85 (185)

Electrical Specification

Lumens ③											
Model	Line Current Amps (50/60Hz)	Input Power	Power Factor	THD	Polycarbonate Clear Globe	Polycarbonate	Glass	Type V	CRI	Color Temp CCT	Equivalent HID Luminaire
						Diffused Globe	Clear Globe	Prismatic Glass Refractor			

NEMA Type V

MLLED2	.21 @120V	26	> .97	< 20%	2400	2300	2500	2200	>70	5700K	70 W
	.10 @277V	26									
	.07 @347V .05 @480V	26 26									
MLLED3	.29 @120V	35	> .97	< 20%	3400	3300	3600	3100	>70	5700K	100 W
	.13 @277V	34									
	.10 @347V .07 @480V	34 34									
MLLED4	.41 @120V	48	> .88	< 20%	4800	4600	5000	4300	>70	5700K	150 W
	.20 @277V	48									
	.13 @347V .10 @480V	48 48									

Surge protection common/differential mode:

1000kHz Ring Wave (w/t 30ohm)

BU:6kv

BH: 2.5kv

1.2/50 μs combination wave (w/t 2 Ω)

	BU	BH
MLLED2	4kv	3kv
MLLED3	4kv	3kv
MLLED4	3kv	3kv

① T numbers represent the maximum internal temperature for Class I, Division 2 and Class I, Zone 2 locations designated by the NEC.

② T numbers represent the maximum surface temperature under a dust blanket for Class II, Division 1 as designated by the NEC.

③ All lumen values are typical (tolerance +/- 10%).

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	Hub Size	Lumen Level	With Type V Polycarbonate Globe ①②	With Type V Polycarbonate Diffused Globe ①②	Glass Globe ①②③	With Type V Glass Refractor ①②③
90° Stanchion — One Hub						
	1 - 1/4	2K	MLLEDR24P5	MLLEDR24D5	MLLEDR24G5	MLLEDR24J5
	1 - 1/4	3K	MLLEDR34P5	MLLEDR34D5	MLLEDR34G5	MLLEDR34J5
	1 - 1/4	4K	MLLEDR44P5	MLLEDR44D5	MLLEDR44G5	MLLEDR44J5
	1 - 1/2	2K	MLLEDR25P5	MLLEDR25D5	MLLEDR25G5	MLLEDR25J5
	1 - 1/2	3K	MLLEDR35P5	MLLEDR35D5	MLLEDR35G5	MLLEDR35J5
	1 - 1/2	4K	MLLEDR45P5	MLLEDR45D5	MLLEDR45G5	MLLEDR45J5
25° Stanchion — One Hub						
	1 - 1/4	2K	MLLEDs24P5	MLLEDs24D5	MLLEDs24G5	MLLEDs24J5
	1 - 1/4	3K	MLLEDs34P5	MLLEDs34D5	MLLEDs34G5	MLLEDs34J5
	1 - 1/4	4K	MLLEDs44P5	MLLEDs44D5	MLLEDs44G5	MLLEDs44J5
	1 - 1/2	2K	MLLEDs25P5	MLLEDs25D5	MLLEDs25G5	MLLEDs25J5
	1 - 1/2	3K	MLLEDs35P5	MLLEDs35D5	MLLEDs35G5	MLLEDs35J5
	1 - 1/2	4K	MLLEDs45P5	MLLEDs45D5	MLLEDs45G5	MLLEDs45J5
Wall — Five Hubs, Four Close-Up Plugs						
	3/4	2K	MLLEDW22P5	MLLEDW22D5	MLLEDW22G5	MLLEDW22J5
	3/4	3K	MLLEDW32P5	MLLEDW32D5	MLLEDW32G5	MLLEDW32J5
	3/4	4K	MLLEDW42P5	MLLEDW42D5	MLLEDW42G5	MLLEDW42J5
	1	2K	MLLEDW23P5	MLLEDW23D5	MLLEDW23G5	MLLEDW23J5
	1	3K	MLLEDW33P5	MLLEDW33D5	MLLEDW33G5	MLLEDW33J5
	1	4K	MLLEDW43P5	MLLEDW43D5	MLLEDW43G5	MLLEDW43J5

① For 120-277 Vac, use suffix **-BU**. For 347-480 Vac, use suffix **-BH**.

② For optional fusing, add suffix **-F** to the end of the catalog number. Factory installed.

③ Guards are available for fixtures with glass globe or refractor. See following pages for accessory ordering information.

⌘ Use of fuse voids Marine Outside Type (Salt Water) rating.

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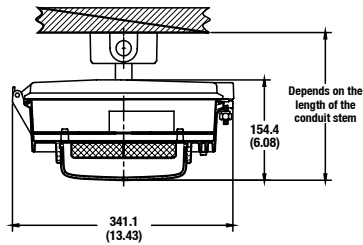
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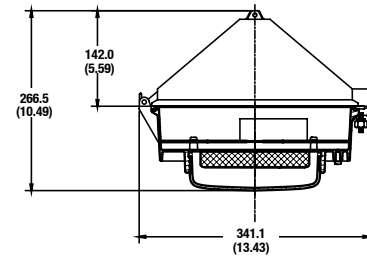
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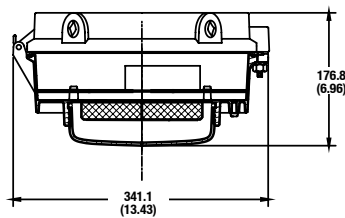
Dimensions in Millimeters (Inches)



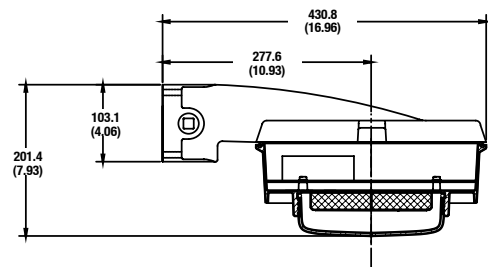
Pendant Mount



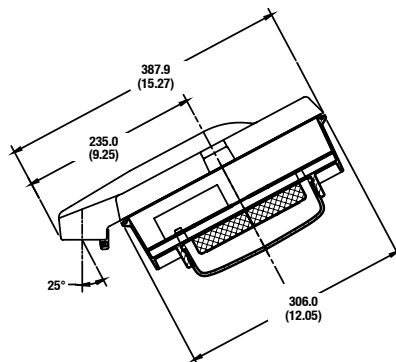
Pendant Cone Mount



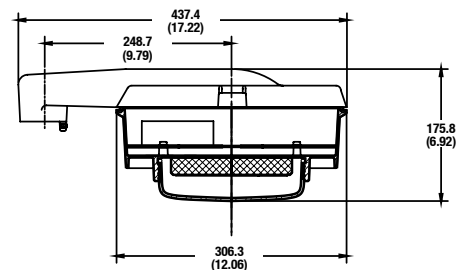
Ceiling Mount



Wall Mount



Angle Stanchion Mount



Stanchion Mount

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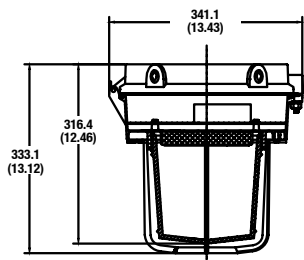
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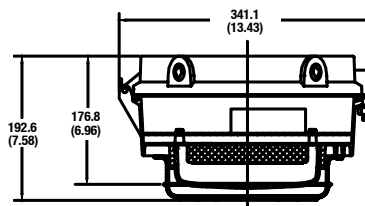
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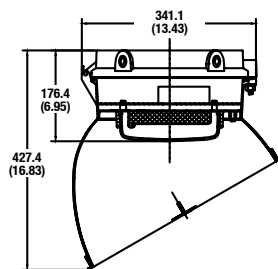
Dimensions With Polycarbonate Globe in Millimeters (Inches)



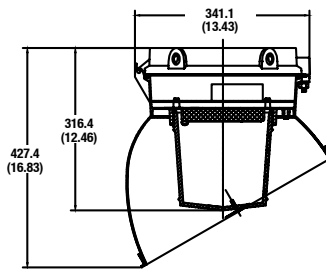
Ceiling Mount w/ Refractor and Guard



Ceiling Mount w/ Glass Globe and Guard



Ceiling Mount with Globe and 30° Reflector



Ceiling Mount with Refractor and 30° Reflector

Mercmaster LED Low Profile Fixture and Mounting Hood Weights

Description	Weight kg (lb)
Fixture Unit (MLLED2/MLLED3)	4.1 (9.00)
Fixture Unit (MLLED4)	4.6 (10.1)
Pendant Mounting Hood	1.0 (2.25)
Pendant Cone Mounting Hood	1.1 (2.50)
Ceiling Mounting Hood	1.4 (3.00)
Wall Mounting Hood	1.8 (4.00)
25° Stanchion Mounting Hood	1.5 (3.25)
90° Stanchion Mounting Hood	1.7 (3.75)

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Visit our website at www.emerson.com or contact us at (800) 621-1506.

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