

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 ①
Class II, Division 2, Groups F, G
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.
- Operating ambient: -40 °C to 55 °C (-40 °F to +131 °F).
- Standard screw-type terminal block can accept UL/CSA 24-8 AWG wire.
- Standard NPT threads.

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. ②
- Photocontrols are available with all except ceiling and pendant cone mounting hoods, and are configured to your operating voltage.

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
- 30° angle reflectors : fiberglass reinforced white polyester

① Clear and diffused polycarbonate globes are not rated for Class II, Division I environments.

② Fusing only permitted for ULus rating.

※ 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. 0.4; C22.2 No. 0.5; C22.2 No. 94; C22.2 No. 60529; C22.2 No. 137; C22.2 No. 250.0
- ANSI/IEC Standard: 60529
- cULus Listed: E10444
- 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.

DesignLights™ Consortium

- All Mercmaster™ LED Low Profile luminaires are listed and meet Design Lights Consortium performance standards.

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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.



LED Chamber

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



Terminal Blocks

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



Cooler Operating Cone Hood

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

Fuses (optional)

Two screws secure fuse kit to mounting boss in any Mercmaster mounting hood. Fuse included. *Note: Fusing only permitted for ULus rating. (Use of fuse voids Marine Outside Type (salt water) rating).*

Photocell (optional)

Available for all fixtures 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.



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.



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.



Reflectors

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



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

Mercmaster™ LED Low Profile Luminaires

Enclosed and Gasketed Fixtures

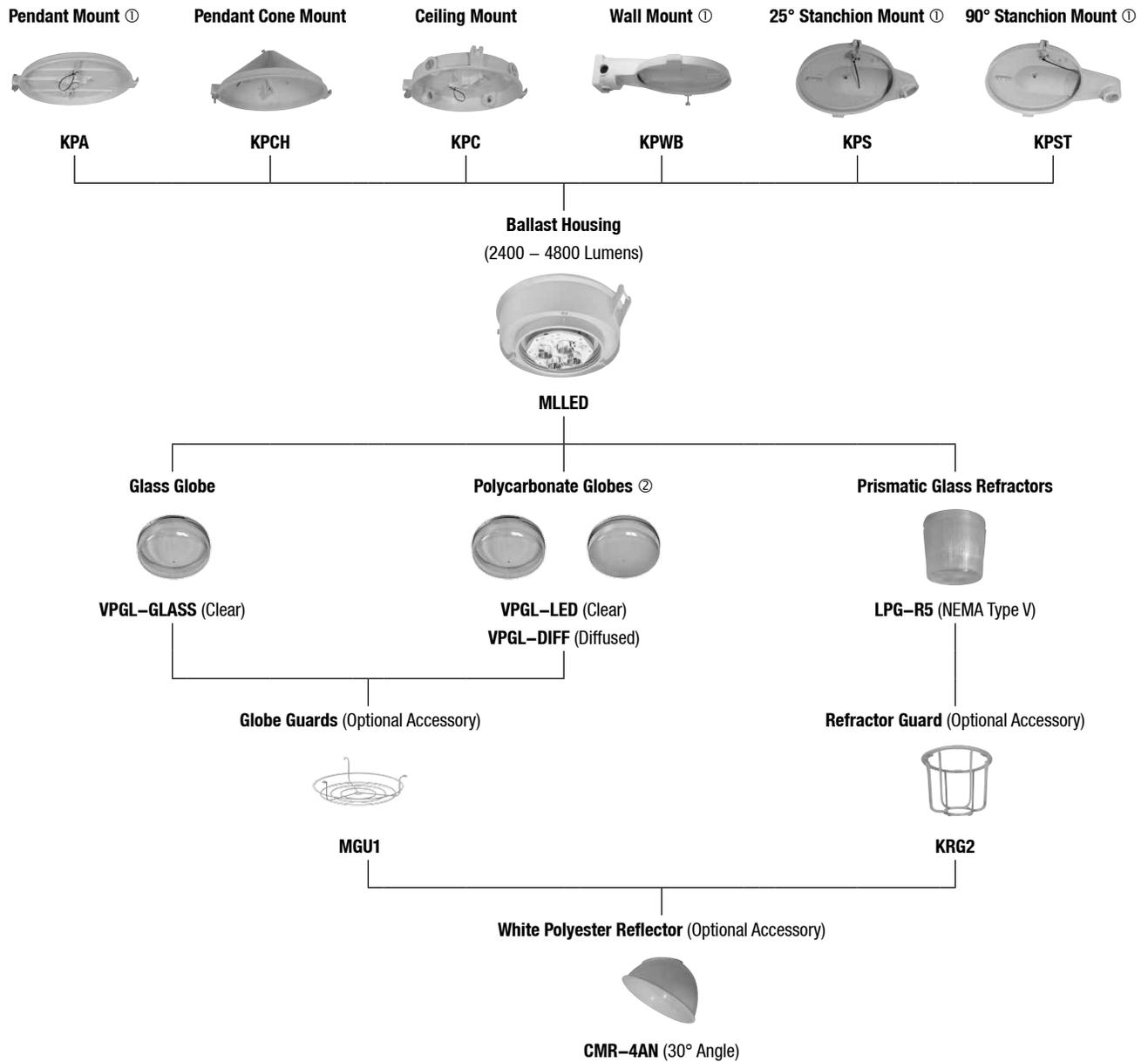
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Mercmaster LED Low Profile Family Tree



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

② Polycarbonate globes are not Class II, Division 1.

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Technical Data

Lamp		Ambient Temperature °C (°F)	Supply Wire Temperature °C (°F)	NEC/CEC				Gas/Dust Simultaneous ② Class I, Division 2/ Class II, Division 1	
Model	Type			Class I, Division 2 ②	Gas Groups	Class I, Zone 2,	Class II, Division 1 and 2 ③		Dust Groups
MLLED2 NEMA Type V	LED	40 (104)	60 (140)	T4	A, B, C, D	T4	T4A	E, F, G	T4A
		55 (131)	75 (167)	T4		T4	T4A		T4A
MLLED3 NEMA Type V	LED	40 (104)	60 (140)	T4	A, B, C, D	T4	T4A	E, F, G	T4A
		55 (131)	75 (167)	T4		T4	T4A		T4A
MLLED4 NEMA Type V	LED	40 (104)	60 (140)	T4	A, B, C, D	T4	T4A	E, F, G	T4A
		55 (131)	75 (167)	T4		T4	T4A		T4A

“T” Numbers Represent the Maximum Internal Temperature ② or Maximum Surface Temperature ③

“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)

Lamp Comparison Chart

Model	Line Current Amps	Input Power	Power Factor	THD	Lumens ④									
					Polycarbonate Clear Globe ①	Polycarbonate Diffused Globe ①	Glass Clear Globe	Type V Prismatic Glass Refractor	CRI	Lamp Life (Hours)	Color Temp CCT	Equivalent HID Luminaire		
NEMA Type V MLLED2	.21 @120V	26	> .97	< 20%	2400	2300	2500	2200	>70	60,000+	5700K	70 W		
	.10 @277V	26												
MLLED3	.29 @120V	35	> .97	< 20%	3400	3300	3600	3100	>70	60,000+	5700K	100 W		
	.13 @277V	34												
MLLED4	.41 @120V	48	> .88	< 20%	4800	4600	5000	4300	>70	60,000+	5700K	150 W		
	.20 @277V	48												

Surge Protection Common/Differential Mode:
 100kHz Ring Wave (w/t 30Ω): 6 KV
 1.2/50 μs Combination Wave (w/t 2Ω): MLLED2,
 MLLED3 4 KV; MLLED4 3 KV

① Clear and diffused polycarbonate globes are not rated for Class II, Division I environments
 ② T numbers represent the maximum internal temperature for Class I, Division 2 and Class I, Zone 2 locations designated by the NEC.
 ③ T numbers represent the maximum surface temperature under a dust blanket for Class II, Division 1 as designated by the NEC.
 ④ All lumen values are typical (tolerance +/- 10%).
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Fixture Unit — Ballast Body and Globe or Refractor



Catalog Number ②							
Lumen Level	LED Wattage	Light Level Equivalent	NEMA Type	For Polycarbonate Globe ①	For Polycarbonate Diffused Globe ①	Glass Globe ③	For Refractor ③
NEC/CEC Certified Fixture Housing - For Hazardous Locations							
2K	26	70W HPS	Type V	MLLED2P5BU	MLLED2D5BU	MLLED2G5BU	MLLED2J5BU
3K	35	100W HPS	Type V	MLLED3P5BU	MLLED3D5BU	MLLED3G5BU	MLLED3J5BU
4K	48	150W HPS	Type V	MLLED4P5BU	MLLED4D5BU	MLLED4G5BU	MLLED4J5BU

Mounting Hoods

	Description	Hub Size	Catalog Number
Pendant	 One Hub	3/4	KPA-75
		1	KPA-100
Pendant Cone	 One Hub, Rigid Mounting	3/4	KPCH-75
		1	KPCH-100
Ceiling	 Five Hubs, Four Close-Up Plugs	3/4	KPC-75
		1	KPC-100
Wall	 Five Hubs, Four Close-Up Plugs	3/4	KPWB-75
		1	KPWB-100
25° Stanchion	 One Hub	1-1/4	KPS-125
		1-1/2	KPS-150
90° Stanchion	 One Hub	1-1/4	KPST-125
		1-1/2	KPST-150

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② BU - Universal Voltages 120-277 Vac, 50/60Hz

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

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Photometric Data — DATA SHOWN IS ABSOLUTE

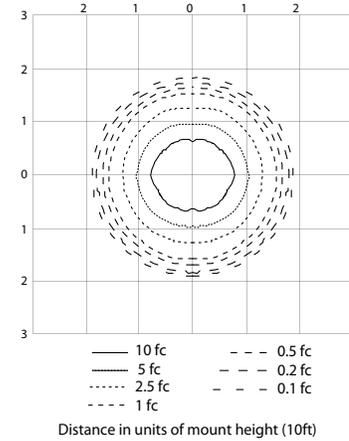
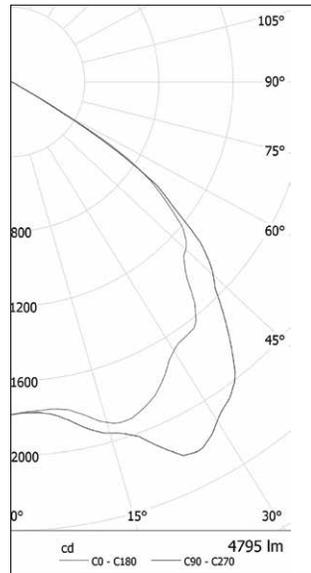
MLLED4P5BU 4K Lumen 5700K CCT with Clear Polycarbonate Lens

Polar Candela Distribution

Isoillumination Plot

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire	Zone	Lumens	% Luminaire
0-30	1676	34.9	0-10	171.9	3.6
0-40	2829	59.0	10-20	549.3	11.5
0-60	4705	98.1	20-30	954.3	19.9
60-90	89.7	1.9	30-40	1153	24.0
0-90	4795	100.0	40-50	1126	23.5
90-180	0.0	0.0	50-60	751.1	15.7
0-180	4795	100.0	60-70	63.9	1.3
			70-80	17.9	0.4
			80-90	7.8	0.2



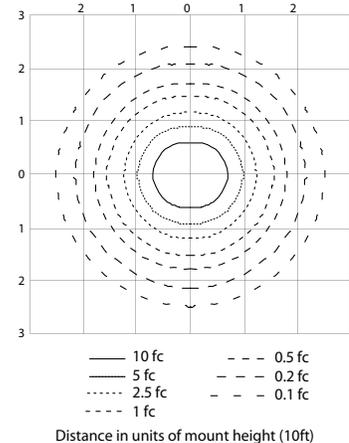
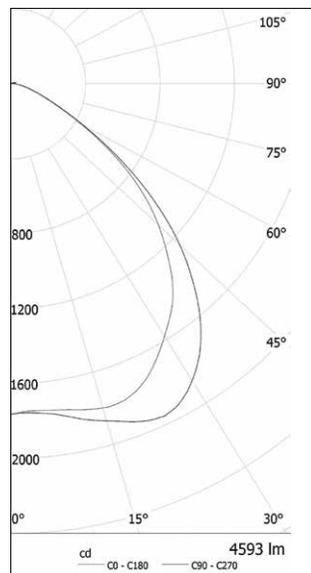
MLLED4D5BU 4K Lumen 5700K CCT with Diffused Polycarbonate Lens

Polar Candela Distribution

Isoillumination Plot

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire	Zone	Lumens	% Luminaire
0-30	1560	34.0	0-10	170.4	3.7
0-40	2583	56.2	10-20	526.5	11.5
0-60	4159	90.6	20-30	863.6	18.8
60-90	398.6	8.7	30-40	1022	22.3
0-90	4558	99.2	40-50	948.3	20.6
90-180	35.2	0.8	50-60	628.0	13.7
0-180	4593	100.0	60-70	266.2	5.8
			70-80	102.8	2.2
			80-90	29.6	0.6
			90-100	10.2	0.2
			100-110	21.6	0.5
			110-120	3.7	0.1



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