

Mercmaster™ II HID Luminaires

High Pressure Sodium and Pulse Start Metal Halide. Mogul Base

UNILETS® for Use with Threaded Metal Conduit.

Class I, Division 2, Groups A, B, C, D †
Class II, Division 1 and 2, Groups E, F, G †
Class III
Fixtures Outside Type (Salt Water)

Applications

- Enclosed and gasketed HID lighting fixtures for use in tunnels, walkways, bridges, storage facilities, processing plants, parking lots, foundries, manufacturing plants, power plants and other locations where moisture, dirt, dust or corrosive atmospheres are encountered.
- Fixtures suited for Class I, Division 2; Class II, Division 1 and 2; and Class III. Suitable for use in wet and outdoor saltwater locations.
- Wide range of wattages and voltages. Choice of ballasts for 100 W-200 W PSMH; and 50 W-150 W HPS lamps in 120, 208, 240, 277 and 480 voltages.
- Choice of light sources: high pressure sodium and pulse start metal halide.
- Choice of optical assemblies: (1) prismatic globe with or without guard through 200 W; or (2) Type V closed prismatic glass refractor through 200 W. (Types II, III and IV also available through 200 W. Also polycarbonate globes for 100 W max.)
- Choice of mounting hoods: pendant (rigid or flexible), 25° (angle) stanchion, ceiling and wall mounting.
- Porcelain reflector for standard applications and Fiberglass reinforced polyester reflector for installations where luminaire is subject to exceptionally severe corrosive atmospheres.

Features

- Superior corrosion-resistance: copperfree aluminum mounting hoods, ballasts and guards with epoxy powder coat, inside and out.
- Standard pendant mounting hood for rigid or flexible mounting. Balanced round design automatically hangs plumb when used with flexible hanger.
- Positive sealing. Hinge and bolt construction assures 360° compression at all points on gasket.
- One-piece ballast housing for each component provides even heat dissipation for cooler operation and longer ballast life.
- Heat barrier isolates capacitor from ballast. Standard non-PCB biodegradable capacitors installed in separate compartment.
- Mogul socket is furnished with 392 °F/200 °C welded leads, pre-wired to the ballast.
- Porcelain socket assures trouble-free operation in high ambient installations.
- Guards protect globes from damage. Keyhole slots allow easy installation and are secured with stainless steel screws.
- Prismatic glass globes and glass refractors are standard (plastic refractors also available) and thread directly into fixture housing. Eliminate glare and provide uniform light distribution.
- Vented reflectors result in cooler, dirt-free operation, increased lumen output.
- Reflectors secured to mounting hood with screws (furnished).
- Choice of reflector styles: white porcelain enamel or Fiberglass reinforced polyester; standard dome or 30° angle.
- Optional photocell provides automatic "on-off" control.
- All Mercmaster mounting hoods have provision for easy field installation of fuses in fixtures (see fuse kit listings).



Standard Materials

- Mounting hoods, ballast bodies and guards: copperfree (4/10 of 1% max.) aluminum
- Reflectors: fiberglass reinforced polyester
- Globes: 50 W-100 W, threaded prismatic glass; 150 W, 175 W and 200W, threaded heat-resistant prismatic glass
- Refractors: 50 W to 150 W, heat-resistant prismatic glass and plastic; 175 W to 200 W, prismatic glass

Standard Finishes

- Mounting hoods, ballast bodies, guards: epoxy powder-coat finish. Two-coat baked finish, electrostatically applied for complete uniform surface protection
- Polyester reflectors: natural finish

Options

- Fuses for fixtures. For fuse kits see *Electrical Specifications and Fuse Kits* page.
- MH fixtures for Quartz Auxiliary lamps. Relay switch installed in fixture when specified. Add suffix **-MTE** to fixture catalog number for 120 V through 277 V, and suffix **-480E** to fixture catalog number for 480 V fixture.
- Smart Hot Restrike emergency option, available for 50 W-150 W HPS only. Add suffix **-SR**. See *50 W, 70 W, 100W, 150 W HPS* page.
- Hot Restrike option add suffix **-R**.
- Smart Starter available for HPS and PSMH. Add suffix **-S**.

Certifications and Compliances

- UL Standard: UL 1598, UL 1598A, UL 844
- UL Listed: E10444

† For specific Class I suitability of each fixture listed, see *Thermal Suitability*.

‡ For 175 W and 200 W fixtures, use 12" refractor only for Groups E, F and G. Heat-resistant glass globe supplied with 175 W and 200 W fixtures.

Note: Fixtures equipped with optional photocell or quartz auxiliary lamp do not comply with UL requirements and are not suitable for use in classified locations.

Mercmaster™ II HID Luminaire Thermal Suitability

Class I, Division 2, Groups A, B, C, D; Class II, Division 1, Groups E, F, G

UNILETS® for Use with Threaded Metal Conduit.

Class I, Division 2, Groups A, B, C, D †
 Class II, Division 1 and 2, Groups E, F, G ‡
 Class III
 Fixtures Outside Type (Salt Water)

The following table shows maximum operating temperatures of Mercmaster fixtures for Class I, Division 2, in a 104 °F/40 °C ambient in free air as rated by UL. As shown, the higher the Temperature Identification Number, the cooler the fixture operates. Keep this in mind when selecting a fixture for a specific chemical listed on the Classified Area Suitability pages. Per the NEC. The temperature marking shown on fixtures shall not exceed the

ignition temperature of the gas to be encountered. To illustrate, a 400W HPS fixture, which has a UL-NEC Temperature Identification Number of 350 (619-662 °F/326-350°C) does NOT exceed the Group D Methane (natural gas) ignition temperature of 1004 °F/540 °C, and is therefore suitable for use in atmospheres containing that chemical.

Mercmaster II Thermal Suitability

Lamp		Supply Wire Temp. (°F/°C)	Ambient Temp. (°F/°C)	Class I, Division 2, Groups A, B, C, D				Class II, Division 1, Groups E, F, G			
Watts	Type			Globe	Globe & Reflector	8" Refractor	12" Refractor	Globe	Globe & Reflector	8" Refractor	12" Refractor
50	HPS	194/90	104/40	T3	T3	T3A	T3A	T3B	T3B	T3B	T3B
70	HPS	194/90	104/40	T3	T3	T3A	T3A	T3B	T3B	T3B	T3B
100	HPS	194/90	104/40	T2C	T2C	T3	T3	T3B	T3B	T3B	T3B
150	HPS	194/90	104/40	T2A	T2A	T2B	T2B	Ⓢ	Ⓢ	Ⓢ	T3B
150	PSMH	194/90	104/40	T2B	T2B	T2D	T2D	—	—	—	—
175	PSMH	194/90	104/40	T2B	T2B	T2C	T2C	—	—	—	—
200	PSMH	194/90	104/40	T2	T2	T2B	T2B	—	—	—	—

“T” Numbers Represent the Maximum Lamp Temperature for Class I, Division 2 Locations and Maximum Surface Temperature Under Dust Blanket for Class II, Division 1 Locations.

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

All HPS fixtures suitable for operation at -40 °F/-40 °C; PSMH at -20 °F/-29 °C.

† For specific Class I suitability of each fixture listed, see Thermal Suitability above.

‡ For 175 W and 200 W fixtures, use 12" refractor only for Groups E, F and G. Heat-resistant glass globe supplied with 175 W and 200 W fixtures.






Ⓢ Pendant, ceiling and wall mount are suitable for groups E and F only with T3A rating. Stanchion mount is suitable for groups E, F and G with a T3B rating.

Mercmaster™ II HID Luminaires Mounting Hoods and Ballast Bodies

High Pressure Sodium and Pulse Start Metal Halide. Mogul Base

Hoods and Ballast Housings are Copperfree Aluminum (4/10 of 1%).

Class I, Division 2, Groups A, B, C, D †
 Class II, Division 1 and 2, Groups E, F, G ‡
 Class III
 Fixtures Outside Type (Salt Water)

Mounting Hoods		Description	Hub Size (Inches)	Catalog Number
Pendant				
	One Hub, Rigid or Flexible Mounting	3/4	LPA-75	
		1	LPA-100	
Ceiling				
	Five Hubs, Four Close-Up Plugs	3/4	LPC-75	
		1	LPC-100	
Wall				
	Five Hubs, Four Close-Up Plugs	3/4	LPWB-75	
		1	LPWB-100	
25° Stanchion				
	One Hub	1-1/4	LPS-125	
		1-1/2	LPS-150	
Mounting Adapter				
	Permits use of Mercmaster II pendant hood on existing V-51 and Mercmaster I mounting hoods. Remove Mercmaster I ballast body from existing mounting hood, thread in adapter and attach wire to Mercmaster II.		LPAD-1	

Mercmaster II Ballast Bodies

Type	Lamp Watts	Ballast Body Catalog Numbers		Add Voltage Suffixes ❶					
		Globe/12" Refractor	8" Refractor	120V	208V	240V	277V	480V	
High Pressure Sodium									
	50	LPB50L	LPBLH50R	-MT	-MT	-MT	-MT	-	
High Power Factor (Min. P.F. 90%)	70	LPB70L	LPBLH70R	-MT	-MT	-MT	-MT	-480	
	100	LPB100L	LPBLH100R	-MT	-MT	-MT	-MT	-480	
	150	LPB150L	LPBLH150R	-MT	-MT	-MT	-MT	-480	
Pulse Start Metal Halide									
	100	LPB100H	LPBH100R	-MTMED	-MTMED	-MTMED	-MTMED	-480MED	
Constant Wattage (Min. P.F. 90%)	150	LPB150P	LPBP150R	-MT	-MT	-MT	-MT	-480	
	175	LPB175P	LPBP175R	-MT	-MT	-MT	-MT	-480	
	200	LPB200P	LPBP200R	-MT	-MT	-MT	-MT	-480	



† For specific Class I suitability of each fixture listed, see Thermal Suitability.

‡ For 175 W and 200 W fixtures, use 12" refractor only for Groups E, F and G. Heat-resistant glass globe supplied with 175 W and 200 W fixtures.

❶ MT (multi-volt) ballasts can be operated at an input voltage of either 120, 208, 240 or 277 V. 480 ballasts can be operated at input voltage of 480 V.

Mercmaster™ II HID Luminaire Electrical Specifications and Fuse Kits

High Pressure Sodium and Pulse Start Metal Halide. Mogul Base

UNILETS® for Use with Threaded Metal Conduit.

Class I, Division 2, Groups A, B, C, D †
 Class II, Division 1 and 2, Groups E, F, G ‡
 Class III
 Fixtures Outside Type (Salt Water)

Lighting

LIGHTING: ENCLOSED AND GASKETED — AREA — HID

Electrical Specifications

Line Voltage	Type of Ballast	Starting Amps	Operating Amps	Total Watts
50 Watt High Pressure Sodium				
120	HX-HPF	0.58	0.58	64
208	HX-HPF	0.35	0.33	64
240	HX-HPF	0.31	0.29	64
277	HX-HPF	0.25	0.25	64
70 Watt High Pressure Sodium				
120	HX-HPF	0.90	0.82	94
208	HX-HPF	0.50	0.48	94
240	HX-HPF	0.44	0.41	94
277	HX-HPF	0.35	0.36	94
480	HX-HPF	0.21	0.21	94
100 Watt High Pressure Sodium				
120	HX-HPF	1.30	1.15	130
208	HX-HPF	0.76	0.67	130
240	HX-HPF	0.66	0.60	130
277	HX-HPF	0.60	0.52	130
480	HX-HPF	0.33	0.31	135
150 Watt High Pressure Sodium				
120	HX-HPF	2.00	1.70	188
208	HX-HPF	1.15	0.95	188
240	HX-HPF	1.00	0.85	188
277	HX-HPF	0.85	0.72	188
480	HX-HPF	0.50	0.47	189
100 Watt Pulse Start Metal Halide				
120	HX-HPF	1.20	1.15	130
208	HX-HPF	0.70	0.70	130
240	HX-HPF	0.61	0.58	130
277	HX-HPF	0.55	0.50	130
480	HX-HPF	0.30	0.35	140
150 Watt Pulse Start Metal Halide				
120	HX-HPF	1.75	1.60	188
208	HX-HPF	1.30	1.00	188
240	HX-HPF	0.85	0.80	188
277	HX-HPF	0.77	0.70	188
480	C.W.A.	0.45	0.42	185
175 Watt Pulse Start Metal Halide				
120	C.W.A.	0.90	1.78	199
208	C.W.A.	0.50	1.08	199
240	C.W.A.	0.35	0.89	199
277	C.W.A.	0.30	0.76	199
480	C.W.A.	0.25	0.50	213
200 Watt Pulse Start Metal Halide				
120	C.W.A.	2.10	2.00	238
208	C.W.A.	1.15	1.25	238
240	C.W.A.	1.10	1.00	238
277	C.W.A.	.75	.85	238
480	C.W.A.	.58	.50	237

Fuse Kit

Order fuses as a separate item by catalog number from right columns.

Lamp Watts	Volts	Fuse Quantity Required	Fuse Kit Catalog Number	
			HPS	PSMH
50	120	1	F5	—
	208	2	F3	—
	240	2	F3	—
	277	1	F2	—
70	120	1	F5	—
	208	2	F3	—
	240	2	F3	—
	277	1	F2	—
	480	2	F2	—
100	120	1	F8	F6
	208	2	F5	F4
	240	2	F5	F3
	277	1	F3	F3
	480	2	F3	F2
150	120	1	F10	F10
	208	2	F5	F5
	240	2	F5	F5
	277	1	F5	F4
	480	2	F3	F3
175	120	1	—	F5
	208	2	—	F3
	240	2	—	F3
	277	1	—	F2
	480	2	—	F2
200	120	1	—	F9
	208	2	—	F6
	240	2	—	F5
	277	1	—	F4
	480	2	—	F2



Fuses are filled with non-combustible granular material. Fuse Kit includes fuse, fuse block, wire, mounting screws and connectors. All mounting hoods have provisions for easy field installation of fuses in fixtures.

† For specific Class I suitability of each fixture listed, see Thermal Suitability.

‡ For 175 W and 200 W fixtures, use 12" refractor only for Groups E, F and G. Heat-resistant glass globe supplied with 175 W and 200 W fixtures.

Mercmaster™ II HID Luminaire Isofootcandle Data

High Pressure Sodium and Pulse Start Metal Halide. Mogul Base

UNILETS® for Use with Threaded Metal Conduit.

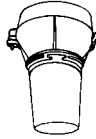
Lighting

LIGHTING: ENCLOSED AND GASKETED – AREA – HID

HPS Lamp Wattage	Mounting Height (Ft/M)	Horizontal Distance from Mounting Point (Ft/M)										
		0/0	5/1.5	10/3.0	15/4.6	20/6.1	25/7.6	30/9.1	35/10.7	40/12.2	45/13.7	50/15.2

Mercmaster II, High Pressure Sodium, No Reflector, No Guard

70 Watt – 5,800 Lumen
100 Watt – 9,500 Lumen
150 Watt – 16,000 Lumen

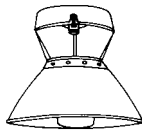


Footcandle Chart (Initial Horiz. FTC)

70	8/2.4	.60	2.70	1.50	.73	.38	.21	.13	.08	.06	.04	.03
	10/3.0	.39	1.70	1.30	.72	.40	.24	.15	.10	.07	.05	.04
	12/3.7	.27	1.10	1.10	.68	.41	.26	.17	.11	.08	.06	.04
	15/4.6	.17	.66	.81	.60	.39	.26	.18	.13	.09	.07	.05
	20/6.1	.10	.37	.43	.40	.33	.25	.18	.13	.10	.08	.06
100	8/2.4	1.00	4.80	2.70	1.20	.62	.35	.21	.14	.10	.07	.05
	10/3.0	.64	2.80	2.20	1.30	.67	.40	.25	.16	.11	.08	.06
	12/3.7	.44	1.80	1.80	1.30	.71	.42	.28	.18	.13	.09	.07
	15/4.6	.28	1.10	1.30	.97	.70	.45	.30	.21	.15	.11	.08
	20/6.1	.16	.59	.69	.70	.55	.42	.32	.23	.17	.13	.10
150	8/2.4	2.50	8.30	4.60	2.20	1.10	.62	.38	.25	.17	.12	.09
	10/3.0	1.60	5.40	4.00	2.20	1.20	.71	.44	.29	.20	.14	.11
	12/3.7	1.10	4.20	3.30	2.00	1.20	.76	.49	.33	.23	.17	.12
	15/4.6	.72	2.10	2.40	1.80	1.20	.79	.54	.38	.27	.20	.15
	20/6.1	.40	1.10	1.30	1.30	1.00	.73	.54	.40	.30	.23	.18

Mercmaster II, High Pressure Sodium, With Reflector, No Guard

70 Watt – 5,800 Lumen
100 Watt – 9,500 Lumen
150 Watt – 16,000 Lumen



Footcandle Chart (Initial Horiz. FTC)

70	8/2.4	14.80	10.00	3.80	1.50	.55	.15	.05	.03	.02	.01	.01
	10/3.0	9.50	7.70	3.70	1.60	.74	.32	.12	.05	.03	.02	.01
	12/3.7	6.60	6.60	3.30	1.50	.87	.46	.18	.10	.05	.02	.02
	15/4.6	4.20	4.20	2.70	1.70	.94	.56	.33	.18	.10	.06	.03
	20/6.1	2.40	2.50	1.90	1.30	.92	.62	.41	.28	.18	.12	.08
100	8/2.4	21.90	16.80	6.30	2.40	.86	.28	.08	.05	.03	.02	.01
	10/3.0	14.00	12.40	6.00	2.70	1.20	.53	.19	.07	.04	.03	.02
	12/3.7	9.70	9.40	5.50	2.80	1.40	.73	.36	.20	.13	.04	.03
	15/4.6	6.20	6.70	4.40	2.70	1.60	.90	.53	.33	.19	.11	.05
	20/6.1	3.50	4.30	3.10	2.20	1.50	1.0	.68	.44	.30	.21	.13
150	8/2.4	36.90	27.80	10.50	3.80	1.30	.35	.14	.08	.04	.03	.02
	10/3.0	23.60	20.80	10.10	4.40	2.00	.78	.29	.11	.07	.04	.03
	12/3.7	16.40	15.80	9.20	4.60	2.20	1.20	.54	.30	.16	.06	.04
	15/4.6	10.50	11.60	7.50	4.50	2.60	1.50	.86	.42	.26	.16	.08
	20/6.1	5.90	7.20	5.20	3.70	2.50	1.70	1.10	.73	.50	.32	.19