

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

Zone 2 - 22
Gas (G) and Dust (D)

Applications

- Enclosed and gasketed fixtures suitable for use in:
 - Marine and wet locations
 - A wide range of industrial, chemical processing and other areas where flammable gases and vapors are present
 - Areas of low clearance, low ceiling heights or where fixture weights must be minimized
 - Non-hazardous locations where severe weather conditions, excessive moisture, dirt, dust, corrosive atmosphere or high ambient temperatures are encountered
- Typical applications include:
 - Pulp and paper mills
 - Processing plants
 - Chemical plants
 - Oil refineries
 - Foundries
 - Manufacturing plants
 - Storage areas
 - Waste and sewage treatment
 - Parking garages
 - Other areas where dust, water, dirt and rough usage are a problem

Features

- Compact light weight low profile design is suited for low mounting heights.
- Modular design allows scores of fixture component combinations to meet installation needs. Uses same mounting hoods as Mercmaster III.
- Fixture housing and mounting hoods are copperfree cast aluminum with baked epoxy finish. All exposed hardware is stainless steel.
- Accommodates a wide range of voltages.
- Ambient temperatures:
 - 70 W to 175 W equivalent: -40 °C to +55 °C
 - 250 W equivalent: -40 °C to +50 °C
- Electrical: 120-277 Vac, 50/60 Hz.
- Pole terminal block: 1 x 0.75 to 6 mm².
- Hinge has high lip for added safety during installation and servicing. Hinge and bolt construction assures 360° compression at all points on ballast housing gasket for positive sealing. Swing away design of captive bolt and nut simplifies servicing.
- All Mercmaster mounting hoods have provision for easy field installation of fuses in fixtures (see Fixture Unit — Electrical Specification).
- NPT and metric threads standard.
- NEMA Type V light distribution is standard.
 - Type V distribution is required in areas where sufficient, evenly distributed light is necessary. It produces a circular distribution that has the same intensity at all angles.
- Ballast bodies and mounting hoods must be purchased separately.



Standard Materials

- Mounting hoods and bodies: cast copperfree (4/10 of 1% max.) aluminum
- All hardware and catch assemblies: stainless steel
- Globe: polycarbonate

Standard Finishes

- Mounting hoods, bodies and guards: baked gray epoxy-clad finish, electrostatically applied for complete uniform protection

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Certifications and Compliances

◆ ATEX/IECEX Certification

- **Certification Type MLEDNA****
- ATEX
 - Gas: Zone 2
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 G
 - Type of Protection: Ex nA IIC Gc
 - Temperature class:
 - 70 W and 100 W equivalent: T4 [+40 °C], T4 [+55 °C], T3 [+65 °C]
 - 150 W to 175 W equivalent: T4 [+40 °C], T4 [+ 55 °C]
 - 250 W equivalent: T4 [+40 °C], T4 [+50 °C]
 - Dust: Zone 22
 - Conforming to ATEX 94/9/CE: Ⓢ II 3 D
 - Type of Protection: Ex tc IIIc Dc
 - Surface Temperature:
 - 70 W and 175 W equivalent: T92 °C
 - 250 W equivalent: T79 °C
 - Ambient Temperature:
 - 70 W and 100 W equivalent: -40 °C to +65 °C
 - 150 W to 175 W equivalent: -40 °C to +55 °C
 - 250 W equivalent: -40 °C to +50 °C
 - ATEX Certificate: LCIE 11 ATEX 1008, LCIE 14 ATEX 3063
 - IECEX Certificate: IECEX LCI 11.0058
 - Index of Protection according EN/IEC 60529: IP66
- IECEX
 - Gas: Zone 2
 - Type of Protection: Ex nA IIC Gc
 - Temperature class:
 - 70 W to 175 W equivalent: T4 [+40 °C], T4 [+ 55 °C]
 - 250 W equivalent: T4 [+40 °C], T4 [+50 °C]
 - Dust: Zone 22
 - Type of Protection: Ex tc IIIc Dc
 - Surface Temperature:
 - 70 W and 175 W equivalent: T92 °C
 - 250 W equivalent: T79 °C
 - Ambient Temperature:
 - 70 W and 175 W equivalent: -40 °C to +55 °C
 - 250 W equivalent: -40 °C to +50 °C
 - IECEX Certificate: IECEX LCI 11.0058
 - Index of Protection according EN/IEC 60529: IP66

◆ EURASEC Certification

– EURASEC N° TC RU C-FR. гб 05.B.00912

◆ Others certification

– INMETRO Certificate: BVC12.1522 ①

DesignLights™ Consortium (for the following models):

- MLEDN15
- MLEDN17
- MLEDN25

① Inmetro certification available on special request only. Contact your local sales for more information

MLEDNA Mercmaster™ LED Series Luminaires

Enclosed and Gasketed Fixtures

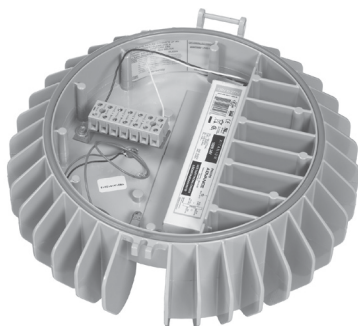
Zone 2 - 22
Gas (G) and Dust (D)

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 (nA).

Modular Plug between LED and driver.

Terminal Blocks (Zone 2)

A seven-point terminal block is provided to facilitate wiring. Terminal block accommodates wire size ranging from 0.75 to 6 mm²

Epoxy Finish

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

Electrical Protection

Ground wire provided to bond mounting hood to ballast housing.

Safety

Rounded heatsink edges prevent possible injury during installation.

"Safety" High Hinge

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

Stainless Steel Latch Assembly

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



LED Chamber

Protected by polycarbonate lens, 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 seals out moisture, dirt and dust. Stays flexible, withstands high temperatures. Closure design assures uniform gasket compression.






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Wall Mount 		Pendant Mount 		Pendant Cone Mount 		Ceiling Mount 	
Description	Catalog Number	Hub Size	Catalog Number	Hub Size	Catalog Number	Hub Size	Catalog Number
3/4"	KPWB75	3/4"	KPA75	3/4"	KPCH75	3/4"	KPC75
1"	KPWB100	1"	KPA100	1"	KPCH100	1"	KPC100
M20	KPWBM20	M20	KPAM20	M20	KPCHM20	M20	KPCM20

25° Stanchion Mount 		90° Stanchion Mount 	
Description	Catalog Number	Description	Catalog Number
1-1/4"	KPS125	1-1/4"	KPST125
1-1/2"	KPS150	1-1/2"	KPST150

Ballast Bodies		
		
LED Wattage	Light Level Equivalent	Ballast Bodies
ATEX/IECEX Certified Ballast Bodies ①		120-277 Vac, 50/60 Hz
35/33 W	70 W Metal Halide	MLEDNA70P5BU
47.5/46 W	100 W Metal Halide	MLEDNA10P5BU
61/62 W	150 W Metal Halide	MLEDNA15P5BU
74/72 W	175 W Metal Halide	MLEDNA17P5BU
95.5/92 W	250 W Metal Halide	MLEDNA25P5BU

Clear Globe

Supplied as standard

Diffused Globe

Option : add "D"

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

Catalog Numbering Guide for Ballast Bodies — ATEX/IECEX Certified Mercmaster LED ①

MLEDNA
MLEDNA -
Mercmaster LED Series
Zones 2 - 22
ATEX/IECEX Certified

17
Light Level Equivalent:
70 - 70 W Metal Halide (2300 lm)
10 - 100 W Metal Halide (3450 lm)
15 - 150 W Metal Halide (4850 lm)
17 - 175 W Metal Halide (6076 lm)
25 - 250 W Metal Halide (9455 lm)

P
Optical Assembly:
P - Polycarbonate
Globe

5

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

D

Options:
D - Diffused Globe

① Ballast bodies and mounting hoods must be purchased separately.

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Technical Data

Lamp		Ambient Temperature °C	Supply Wire Temperature °C	Gas Class of Temperature	Dust Surface Temperature
Light Level Equivalent to HID	Type				
70 Watt NEMA Type V	LED	40°C	60°C	T4	T92°C
		55°C	75°C	T4	
		65°C	90°C	T4	
100 Watt NEMA Type V	LED	40°C	60°C	T4	T92°C
		55°C	75°C	T4	
		65°C	90°C	T4	
150 Watt NEMA Type V	LED	40°C	60°C	T6	T92°C
		55°C	75°C	T6	
175 Watt NEMA Type V	LED	40°C	60°C	T6	T92°C
		55°C	75°C	T6	
250 Watt NEMA Type V	LED	40°C	60°C	T4	T79°C
		50°C	75°C	T4	

Lamp Comparison Chart

Lamp Data	Line Current Amps	Input Power	Lumens	CRI	Lamp Life (Hours)	Color Temp CCT
NEMA Type V						
MLEDN70	0.31 A @ 120 V	35 W	2300 lm	70	60,000+	5650
	0.17 A @ 277 V	33 W				
	0.24 A @ 347 V	34 W				
	0.11 A @ 480 V	32 W				
MLEDN100	0.41 A @ 120 V	47.5 W	3450 lm	70	60,000+	5650
	0.20 A @ 277 V	46 W				
	0.25 A @ 347 V	42 W				
	0.12 A @ 480 V	44 W				
MLEDN150	0.53 A @ 120 V	61 W	4850 lm	70	60,000+	5650
	0.25 A @ 277 V	62 W				
	0.29 A @ 347 V	62 W				
	0.14 A @ 480 V	64 W				
MLEDN175	0.63 A @ 120 V	74 W	6076 lm	70	60,000+	5650
	0.28 A @ 277 V	72 W				
	0.25 A @ 347 V	86 W				
	0.16 A @ 480 V	88 W				
MLEDN250	0.83 A @ 120 V	95.5 W	9455 lm	70	60,000+	5650
	0.36 A @ 277 V	92 W				
	0.45 A @ 347 V	96 W				
	0.31 A @ 480 V	95 W				


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Ballast bodies

Ballast bodies and mounting hoods must be purchased separately

	LED Wattage BU	Light Level Equivalent	Current Draw	Voltage Range	Weight kg	Ballast bodies Catalog Number
	35/33 W	70 W HPS	120 Vac @ .31 Amps 277 Vac @ .17 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA70P5BU
	47.5/46 W	100 W HPS	120 Vac @ .41 Amps 277 Vac @ .20 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA10P5BU
	61/62 W	150 W HPS	120 Vac @ .53 Amps 277 Vac @ .25 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA15P5BU
	74/72 W	175 W PSMH	120 Vac @ .63 Amps 277 Vac @ .28 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA17P5BU
	95.5/92 W	250 W HPS/PSMH	120 Vac @ .83 Amps 277 Vac @ .36 Amps	120-277 Vac, 50/60 Hz	8.8	MLEDNA25P5BU

Mounting Hoods

Ballast bodies and mounting hoods must be purchased separately

	Description	Hub Size	Weight kg	Mounting Hoods Catalog Number	
Pendant		One Hub, Rigid Mounting	3/4	1.0	KPA75
			1	1.0	KPA100
			M20	1.0	KPAM20
Pendant Cone		One Hub, Rigid Mounting	3/4	1.1	KPCH75
			1	1.1	KPCH100
			M20	1.1	KPCHM20
Ceiling		Five Hubs, Four Close-Up Plugs	3/4	1.4	KPC75
			1	1.4	KPC100
			M20	1.4	KPCM20
Wall		Five Hubs, Four Close-Up Plugs	3/4	1.8	KPWB75
			1	1.8	KPWB100
			M20	1.8	KPWBM20
25° Stanchion		One Hub	1-1/4	1.5	KPS125
			1-1/2	1.5	KPS150
90° Stanchion		One Hub	1-1/4	1.7	KPST125
			1-1/2	1.7	KPST150




Shaded catalog numbers are normally stocked items. All other items are made to order.

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Replacement Parts

	Description	Catalog Number
Globes and Gaskets		
	Clear Globe	VPGLLED
	Diffused Globe	VPGLDIFF
	Globe Gasket — Silicone Rubber	KRFGK

Description	Catalog Number
LED Array	
70 Watt LED Array Assembly, Type V, White LED's	MLEDN70A5W
100 Watt LED Array Assembly, Type V, White LED's	MLEDN10A5W
150 Watt LED Array Assembly, Type V, White LED's	MLEDN15A5W
175 Watt LED Array Assembly, Type V, White LED's	MLEDN17A5W
250 Watt LED Array Assembly, Type V, White LED's	MLEDN25A5W

Drivers

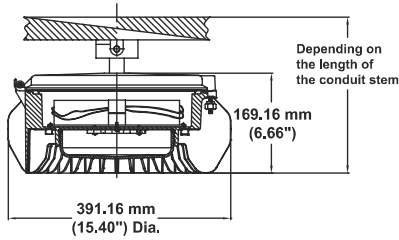
120-277 V Driver (70 W thru 250 W only)	MLEDNDBU
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MLEDNA Mercmaster™ LED Series Luminaires

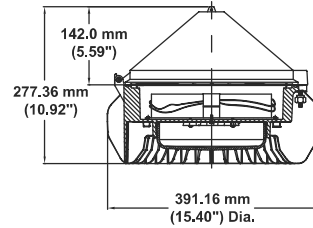
Enclosed and Gasketed Fixtures

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Gas (G) and Dust (D)

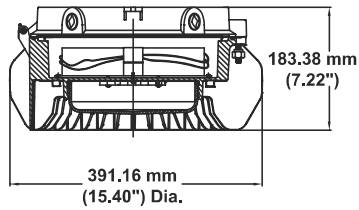
Dimensions in Millimeters (Inches)



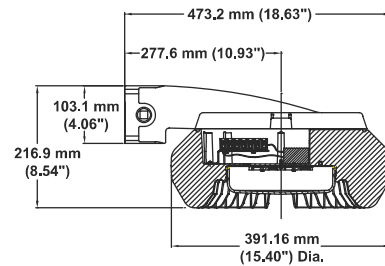
Pendant Mount



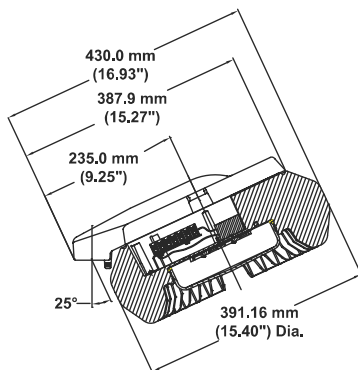
Pendant Cone Mount



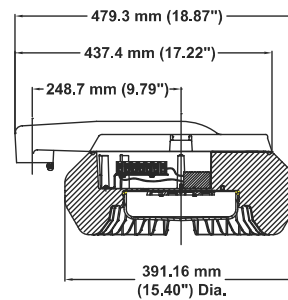
Ceiling Mount



Wall Mount



25° Stanchion Mount



90° Stanchion Mount

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Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: **MLEDN70P5BU**

Lamps: Mercmaster LED, Polycarbonate Optic

Candela Distribution

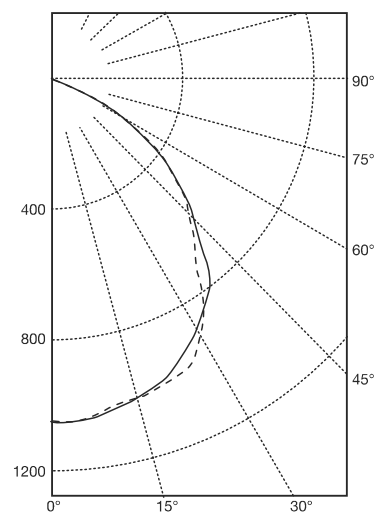
	0.0	22.5	45.0	67.5	90.0	Flux
0	1054	1054	1054	1054	1054	
5	1048	1047	1051	1047	1048	100
15	1016	1014	1016	1014	1016	287
25	977	961	941	961	977	442
35	805	779	824	779	805	497
45	583	607	603	607	583	465
55	408	425	411	425	408	358
65	185	146	139	146	185	133
75	5	5	4	5	5	9
85	1	0	0	0	1	1
90	0	0	0	0	0	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	829	36.1
0-40	1326	57.7
0-60	2149	93.5
0-90	2292	99.7

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.3	1.3



REPORT NUMBER: **MLEDN10P5BU**

Lamps: Mercmaster LED, Polycarbonate Optic

Candela Distribution

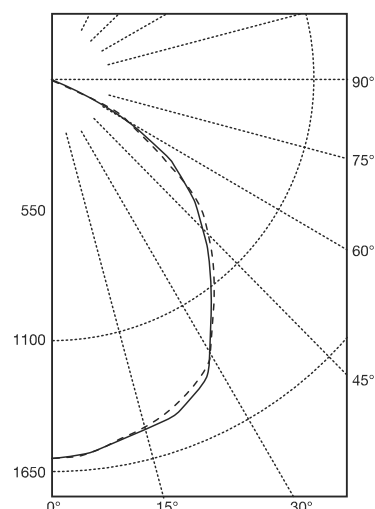
	0.0	22.5	45.0	67.5	90.0	Flux
0	1580	1580	1580	1580	1580	
5	1569	1568	1568	1568	1569	149
15	1509	1510	1513	1510	1509	427
25	1412	1414	1437	1414	1412	655
35	1177	1215	1171	1215	1177	748
45	934	915	893	915	934	707
55	577	588	632	588	577	527
65	228	218	195	218	228	209
75	6	7	6	7	6	13
85	0	0	0	0	0	1
90	0	0	0	0	0	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1231	35.8
0-40	1980	57.6
0-60	3213	93.5
0-90	3438	100.0

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2



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Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: MLEDN15P5BU

Lamps: Mercmaster LED, Polycarbonate Optic

Candela Distribution

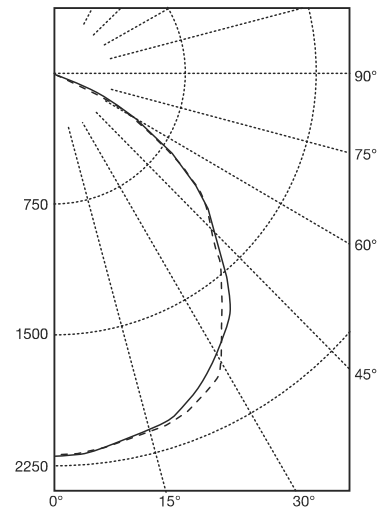
	0.0	22.5	45.0	67.5	90.0	Flux
0	2208	2208	2208	2208	2208	
5	2202	2195	2197	2195	2202	209
15	2137	2131	2127	2131	2137	603
25	2045	2003	1977	2003	2045	926
35	1669	1658	1735	1658	1669	1051
45	1252	1282	1297	1282	1252	988
55	836	850	838	850	834	746
65	276	307	333	307	276	298
75	16	12	11	12	16	22
85	2	1	1	1	2	2
90	1	0	0	0	1	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1738	35.8
0-40	2789	57.5
0-60	4523	93.3
0-90	4844	99.9

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2



REPORT NUMBER: MLEDN17P5BU

Lamps: Mercmaster LED, Polycarbonate Optic

Candela Distribution

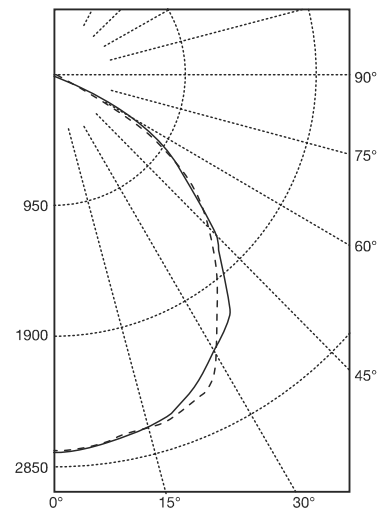
	0.0	22.5	45.0	67.5	90.0	Flux
0	2739	2739	2739	2739	2739	
5	2724	2724	2725	2724	2724	259
15	2660	2658	2655	2658	2660	752
25	2553	2508	2462	2508	2553	1156
35	2069	2062	2201	2062	2069	1312
45	1580	1614	1655	1614	1580	1243
55	1047	1093	1046	1093	1047	943
65	353	380	391	380	353	378
75	19	15	16	15	19	28
85	2	1	1	1	2	2
90	1	0	0	0	1	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	2167	35.7
0-40	3478	57.2
0-60	5664	93.2
0-90	6072	99.9

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2



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Photometric Data — DATA SHOWN IS ABSOLUTE

REPORT NUMBER: MLEDN250P5BU ①

Lamps: Mercmaster LED, Polycarbonate Optic

Candela Distribution

	0.0	22.5	45.0	67.5	90.0	Flux
0	4206	4206	4206	4206	4206	
5	4170	4182	4177	4182	4170	397
15	4035	4046	4038	4046	4035	1145
25	3913	3888	3829	3888	3913	1784
35	3211	3233	3380	3233	3211	2046
45	2484	2524	2532	2524	2484	1942
55	1710	1763	1708	1763	1710	1530
65	682	564	606	564	682	568
75	20	18	17	18	20	31
85	2	1	1	1	2	2
90	1	1	0	1	1	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	3326	35.2
0-40	5372	56.8
0-60	8844	93.5
0-90	9445	99.9

CIE Type – Direct

Plane	Spacing Criteria
0-Deg	90-Deg
1.2	1.2

