

Specifications

LED Module M8H-H Series



Features

- Lumileds Luxeon 3030 2D LED;
- IP68 rated modules;
- 5VA rated for fire resistance;
- Lumen flux: up to 6875lm per module;
- Low maintenance cost with lifetime >54,000hrs (L70);
- Multiple lighting distribution options available;
- Optical lens transmittance up to 93%;
- Multiple modules can easily be connected in series via connector offering;
- 5 years warranty;
- Approvals:



Applications

- Street Lighting
- Tunnel Lighting
- Flood Lighting
- High/Low bay Lighting

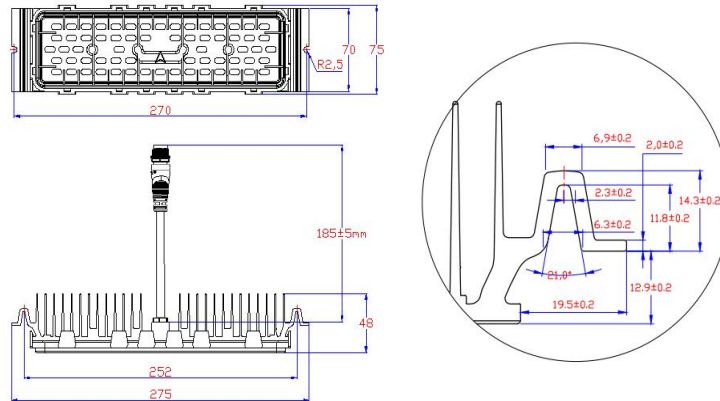
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Mechanical Drawings

Dimensions
275x75x48mm

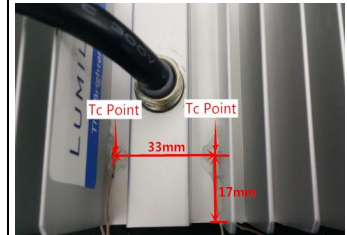
Net Weight
0.85kg



Tolerance: ±2.0mm, unless otherwise specified.

Performance

Series	Lighting Source	Driving Current	T _c	Nominal CCT	Minimum CRI ^[3]	Minimum Flux ^{[1][2][3]}	Typical Flux ^{[1][2][3]}	Typical Efficacy ^{[1][2][3]}	Color Consistency	Location of T _c Point
M8H-H	63 x Lumileds Luxeon 3030 2D LEDs	700mA	52°C	3000K	70	4450lm	4940lm	131lm/W	5 SDCM	On the heat sink of the module, 17mm from the edge and 33mm apart (16.5mm on either side of the centerline of the module). See the picture below:
				4000K		4680lm	5200lm	138lm/W		
				5000K		4680lm	5200lm	138lm/W		
				5700K		4680lm	5200lm	138lm/W		
				3000K	80	4060lm	4510lm	119lm/W		
				4000K		4500lm	5030lm	133lm/W		
				5000K		4500lm	5030lm	133lm/W		
				5700K		4500lm	5030lm	133lm/W		
		1050mA	64°C	70	3000K	6060lm	6732lm	119lm/W		
					4000K	6375lm	7080lm	125lm/W		
					5000K	6375lm	7080lm	125lm/W		
					5700K	6375lm	7080lm	125lm/W		
				80	3000K	5500lm	6115lm	105lm/W		
					4000K	6170lm	6850lm	121lm/W		
					5000K	6170lm	6850lm	121lm/W		
					5700K	6170lm	6850lm	121lm/W		



Notes: [1] Flux and efficacy values above are based on steady-state measurements done in 25°C ambient temperature where there is a tolerance of ±3°C on T_c.

[2] Flux data above are based on lens transmittance 93%.

[3] Lumileds LED maintains a tolerance of ±7.5% on luminous flux, and ±2 on CRI.

Item	Minimum	Typical	Maximum
Forward Voltage (@ 700mA, T _c =52°C) ^{[4][5]}	49.5V	54V	58.5V
Power Consumption (@ 700mA, T _c =52°C) ^[4]	34.65W	37.8W	40.95W

Current	L70	Maximum T _c ^[6]
700mA	>54,000 hrs	103.2°C
1050mA	>54,000 hrs	102.4°C

Notes: [4] Voltage and power values are based on calculated LED values @100% driver efficiency.

Use for reference only since temperature and LED driver current have influence on forward voltage and on power consumption.

[5] Lumileds LED maintains a tolerance of ±0.1V on forward voltage measurements.

Current	@700mA	@1050mA	@Maximum ^[7] 1100mA
Maximum T _c ^[6]	103.2°C	102.4°C	102.3°C

IP Rating	Storage Temperature	Relative Humidity
IP68	-40~+50°C	10%~90%

Notes: [6] Theoretically calculated T_c value based on maximum T_s 105°C as per warranty.

[7] Maximum actual drive current. Drive current, including current ripple, should not exceed 1200mA.

Beam Type

For Street Light Applications

Lens Code	M8H-H-T1S (Type I Short)		M8H-H-90D (Beam Angle (FWHM) 100+/-10°)	
	Lens Transmittance	93%	Lens Transmittance	93%
For Modules Parallel with Road				

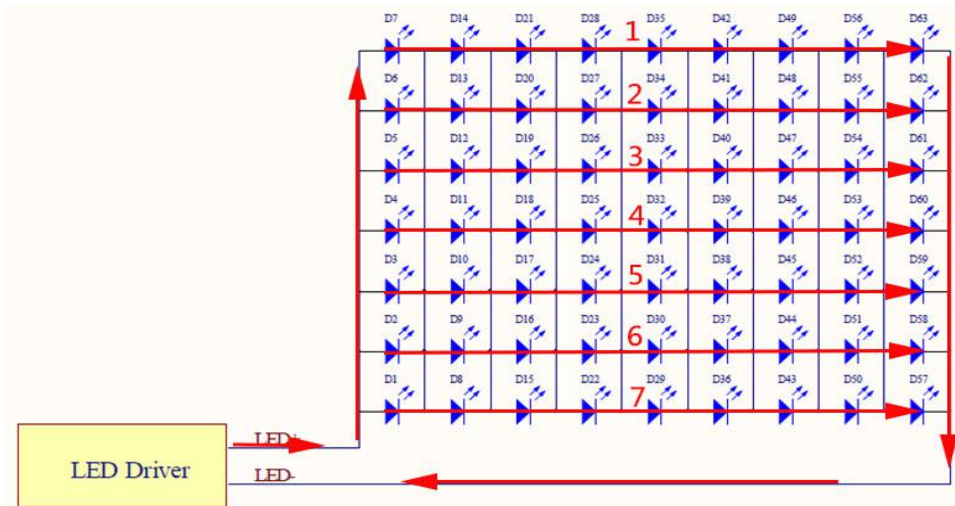
For Flood/ High/ Low Bay Light Applications

Lens Code	M8H-H-25D		M8H-H-40D	
	NEMA Type	3Hx3V	NEMA Type	5Hx5V
Central Symmetry	Beam Angle (FWHM)	25°	Beam Angle (FWHM)	40°
	Lens Transmittance	93%	Lens Transmittance	93%
	M8H-H-60D		M8H-H-LBN	
	NEMA Type	6Hx6V	NEMA Type	7Hx7V
	Beam Angle (FWHM)	60°	Beam Angle (FWHM)	110°
Lens Transmittance	93%	Lens Transmittance	93%	

Notes: — C0/180 — C90/270

Installation guide: the arrow on the lens (parallel with C90/270) should be perpendicular to road and directs to road center.

Circuit Diagram













Drivers Recommendation

Driver Description	Inventronics	Philips
Driver for 1 module @700mA	EUC-052S070DT ⁵	XI075C070V105CNY2 ⁵
Driver for 2 modules @700mA	EUG-096S105DT ⁴	XI100C110V143BSY1 ⁴⁵
Driver for 3 modules @700mA	EUG-150S105DT ⁴	LEDINTA0700C210DO ⁵
Driver for 4 modules @700mA	EUG-200S105DT ⁴	XI300C150V300BSR1 ⁴⁵
Driver for 5 modules @700mA	EUG-240S105DT ⁴	XI300C150V300BSR1 ⁴⁵
Driver for 1 module @1050mA	EUG-075S105DT ⁴	XI100C110V143BSY1 ⁴⁵
Driver for 2 modules @1050mA	EUG-150S105DT ⁴	XI150C105V140CNF1 ⁵
Driver for 3 modules @1050mA	EUG-200S105DT ⁴	XI300C150V300BSR1 ⁴⁵
Driver for 4 modules @1050mA	EUD-320S150DT ⁴	XI300C150V300BSR1 ⁴⁵

Notes:

1. Alternative board + driver configurations can be evaluated upon request.
2. Please refer to the driver datasheet for detailed specifications.
3. All drivers feature 0-10V dimming.
4. Driver output current can be adjusted.
5. For outdoor lighting application, this driver should work with a line-earth 10KV SPD.

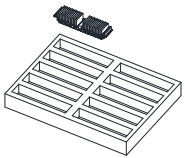
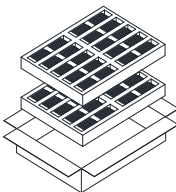
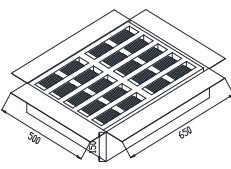
Waterproof Connectors Recommendation

Picture	Model	Description	Length
	C2A-01M500	IP68 female connector for 1 module	Single female terminal 49.5mm + flying leads 550±50mm
	C2A-S2M500	IP68 female connector for 2 modules in series	Dual female terminal 78.1mm + flying leads 550±50mm
	C2A-S3M500	IP68 female connector for 3 modules in series	Triple female terminal 113.1mm + flying leads 550±50mm
	C2A-S4M500	IP68 female connector for 4 modules in series	Quad female terminal 148.1mm + flying leads 550±50mm
	C2A-S5M620	IP68 female connector for 5 modules in series	Quad female terminal 183mm + flying leads 620±50mm
	C2A-01F500	IP68 male connector	Single male terminal 55.7mm + flying leads 550±50mm
	C2A-1FS1M	IP68 male and female connector for extension	Single female terminal 49.5mm + cable 200±20mm + single male terminal 55.7mm
	C2A-S2M200F	IP68 male and female connector for 2 modules in series	Dual female terminal 78.1mm + cable 200±20mm + single male terminal 55.7mm
	C2A-S3M200F	IP68 male and female connector for 3 modules in series	Triple female terminal 113.1mm + cable 200±20mm + single male terminal 55.7mm
	C2A-S4M200F	IP68 male and female connector for 4 modules in series	Dual female terminal 148.1mm + cable 200±20mm + single male terminal 55.7mm

Notes: The connectors are allowed to be used in combination for 5-module connection and extending purpose.

Cable Specifications	Withstanding DC Voltage	Withstanding Current	Certification	Working Temperature
2x18 AWG	420Vdc	10A	UL	-40~+80°C

Packaging

10 pcs/tray	2 trays/ carton	20 pcs/carton
		

Notes:

1. Carton dimensions: 650x600x150mm
2. Gross weight: 19.8kg (Empty package: 2.8kg)

Module Part Number

Example:

M8H H T1S L30 740
 1 2 3 4 5

1. Module Series	2. Voltage	3. Beam Type	4. LED Type	5. CRI/CCT
M8H - Mid Power LED's	H = 49.5-58.5V	T1S = Type I Short 90D = 100±10DEG 25D = 25DEG 40D = 40DEG 60D = 60DEG LBN = Lambertian	L30 = Lumileds Luxeon 3030 2D	730 = 70CRI/3000CCT 740 = 70CRI/4000CCT 750 = 70CRI/5000CCT 757 = 70CRI/5700CCT 830 = 80CRI/3000CCT 840 = 80CRI/4000CCT 850 = 80CRI/5000CCT 857 = 80CRI/5700CCT