

MechaTronix in LED

LPF8050-ZHC Edison Opto Pin Fin LED Cooler ø80mm



Features & Benefits

- The LPF8050-ZHC Pin Fin LED cooler is specifically designed for luminaires using the Edison Opto COB and LED modules. Mechanical compatibility with direct mounting of the LED modules to the LED cooler and thermal performance matching the lumen packages.
- For spot and downlight designs from 1,000 to 3,000 lumen
- Thermal resistance Rth 2.34°C/W
- Modular design with mounting holes foreseen for Edison Opto EdiPower II / EdiPower III HM16, HM24, HM30, HM40 LED COB and Edilex Spot Light Module (SLM) LED modules, direct mounting or by use of Zhaga Book 3 LED holder.
- Diameter 80mm - Standard height 50mm
Other heights on request
- Forged from highly conductive aluminum



Order Information



Example : LPF8050-ZHC-B

LPF8050-ZHC- 1

- 1** Anodising Color
B - Black
C - Clear
Z - custom (specify)

The LPF8050-ZHC pin fin LED cooler is designed in this way that you can mount various LED modules on the same LED cooler.

Simple mounting with 2 screws

Recommended screw force 6lb/in

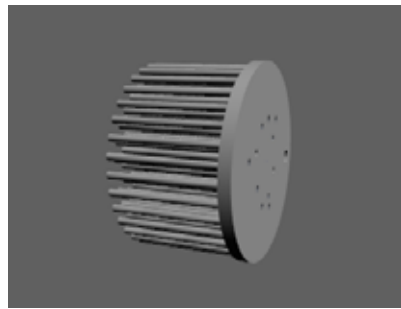
Screws are available from MechaTronix

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Product Details



Model n°

LPF8050-ZHC

Dimension (mm) ^{*1}	ø80 x h50
Volume (mm ³)	72128
Cooling Surface (mm ²)	74885
Weight (gr)	195
Thermal Resistance (°C/W) ^{*2}	2.34
Power Pd (W) ^{*3}	21
Heat Sink Material	AL1070

^{*1} 3D files are available in ParaSolid, STP and IGS on request

^{*2} The thermal resistance Rth is determined with a calibrated heat source of 30mm x 30mm central placed on the heat sink, Tamb 40°

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Mounting Options

The LPF8050-ZHC Pin Fin LED cooler is standard foreseen from a variety of mounting holes which allow direct mounting of LED engines, COB's and secondary optics on the LED heat sink.

In this way mechanical afterwork and related costs can be avoided, and lighting designers can standardize their designs on a limited number of LED coolers.

Below you find an overview of Edison Opto LED modules and COB's which standard fit on the LPF8050-ZHC Pin Fin LED cooler.

MechaTronix performs thermal validation tests on each of the LED modules mounted on the LED cooler and publishes this data in the LED brand thermal validation reports.

For a full overview of available LED coolers for Edison Opto LEDs, please refer to the Edison Opto LED cooler overview on www.led-heatsink.com/Download.php or scan the QR code here.



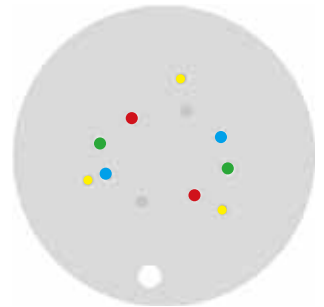
Edison Opto LED Modules and COB's



Edison Opto with headquarters in Chung-Ho Dist, New Taipei City, Taiwan is a professional LED manufacture with specializes in designing and producing High-power LEDs, solid state lighting applications, LED sensors and SPDIFs. In response to rapid growth of capacity demand, Edison Opto has established factories in Dongguan and Yangzhou China and subsidiaries in USA and Germany. Edison Opto COB LED modules outstand in light quality and are available in the broadest lumen and CRI range available on the market.

Mounting indicator marks overview

MechaTronix recommends the use of a high thermal conductive interface between the LED module and the LED cooler. Either thermal grease, a thermal pad or a phase change thermal pad thickness 0.1-0.15mm is recommended. Thermal pads or phase change thermal pads can be pre-applied from MechaTronix.



Edison Opto EdiPower II & EdiPower III HM series

Model Names 16W - 30W

- 2PHM16xxxx
- 2PHM24xxxx
- 2PHM30xxxx

Mounting

- Direct mounting with 2 screws M3 x 6mm
Red indicator marks
- With Zhaga Book 3 LED holder
BJB Spotlight connector 47.319.2021
Ideal Industries Chip-Lok™ holder 50-2103CT
TE Connectivity Lumawise type Z50 2213254-1
TE Connectivity Lumawise type Z50 2213254-2
Mounting with 2 screws M3 x 6mm
Green indicator marks
- TE Connectivity 1pc LED holder 6-2154874-1
TE Connectivity Scalable 2pc LED holder 2-2154857-1
Mounting with 2 screws M3 x 6mm
Blue indicator marks



Model Names 40W

- 2PHM40xxxx

Mounting

- With Zhaga Book 3 LED holder
BJB Spotlight connector 47.319.2033
Ideal Industries Chip-Lok™ holder 50-2204CT
Mounting with 2 screws M3 x 6mm
Green indicator marks



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Mounting Options



Edison Opto EdiLex Spot Light Module (SLM)

Model names

- 5PHR09xxxx
- 5PHR11xxxx
- 5PHR22xxxx
- 5PHV35xxxx

Mounting

- Direct mounting with 2 screws M3 x 8mm
Green indicator marks

Reflector ring Mounting

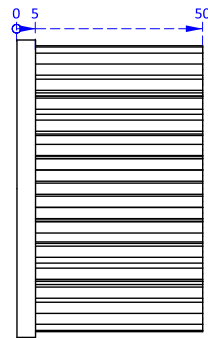
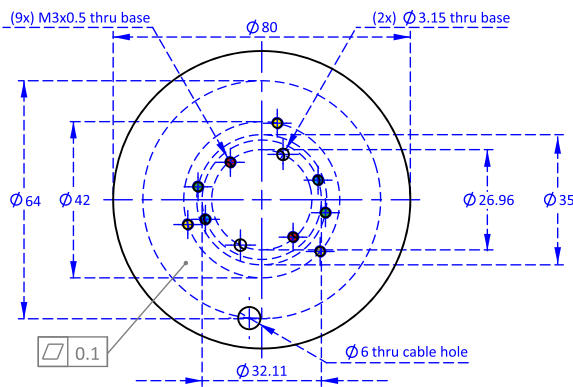
- This optional ring can be mounted on top of the Edison Opto EdiLex spot light module and provides in this way an easy plug-and-play attachment of various reflectors.
- Mounting with 3 screws M3 x 8mm
Yellow indicator marks

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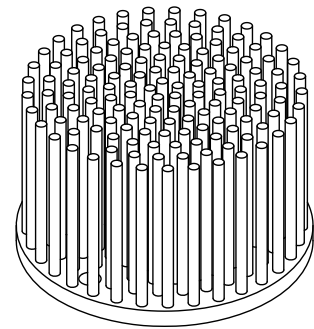
LPF8050-ZHC Edison Opto Pin Fin LED Cooler $\phi 80\text{mm}$



Drawings & Dimensions



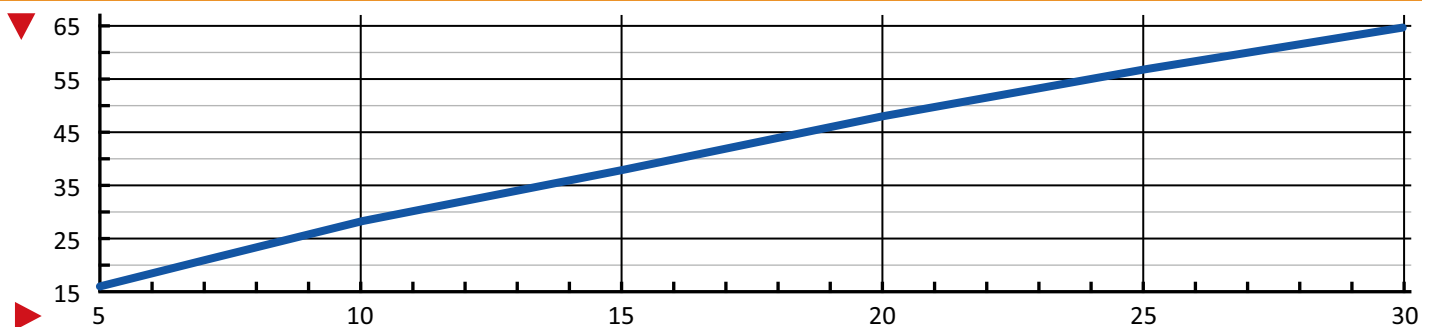
Example: LPF8050-ZHC



Thermal Data

$P_d = P_e \times (1 - \eta_L)$			LED Light efficiency, η_L (%)			Heat sink to ambient thermal resistance R_{hs-amb} ($^{\circ}\text{C}/\text{W}$)	Heat sink to ambient temperature rise T_{hs-amb} ($^{\circ}\text{C}$)
			17%	20%	25%		
Dissipated Power $P_d(\text{W})$	5	Electrical Power $P_e(\text{W})$	6.02	6.25	6.67	3.2	16
	7		8.43	8.75	9.33	3.0	21
	10		12.05	12.50	13.33	2.8	28
	15		18.07	18.75	20.00	2.5	38
	20		24.10	25.00	26.67	2.4	48
	25		30.12	31.25	33.33	2.3	57
	30		36.14	37.50	40.00	2.2	65

Heat sink to ambient temperature rise T_{hs-amb} ($^{\circ}\text{C}$)



Dissipated Power $P_d(\text{W})$