



for

LED



xLED

xLED-EDI-8030 Pin Fin LED Heat Sink Φ 80mm for Edison

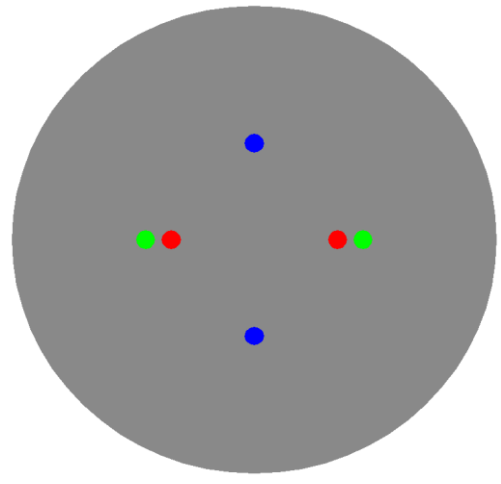
Features VS Benefits

- * The xLED-EDI-8030 Edison Pin Fin LED Heat Sinks are specifically designed for luminaires using the Edison LED engines.
- * Mechanical compatibility with direct mounting of the LED engines to the LED cooler and thermal performance matching the lumen packages.
- * For spotlight and downlight designs from 1,000 to 2,600 lumen.
- * Thermal resistance range Rth 3.13°C/W.
- * Modular design with mounting holes foreseen for direct mounting of Edison COB series.
- * Diameter 80.0mm - standard height 30.0mm Other heights on request.
- * Forged from highly conductive aluminum.



Zhaga LED engine and radiator assembly is a unified future international standardization

- * Below you find an overview of Edison COB's and LED modules which standard fit on the Pin Fin LED Heat Sinks.
- * In this way mechanical after work and related costs can be avoided, and lighting designers can standardize their designs on a limited number of LED Pin Fin LED Heat Sink.



Edison LED Modules directly Mounting Options

Edison Opto_EdiPower® V, III HC, III HE/ CR170/ CR190, III SL Series :

- 2PHE33xxxxP35202; 2PHC40xxxxP35001;
- 2PHE36xxxxP35202; 2PHE40xxxxP35001;
- 2PHE55xxxxP35202; 2PHE27xxxxP35001;
- 2PHE60xxxxP35202; 2PSL40xxxxP16010;

With the Zhaga Book 3 holders for the green indicator marks.

BJB holder: 47.319.2030.50;

AAG.STUCCHI: 8102-G2

Without the holders for the blue indicator marks.

Direct mounting with machine screws M3x6.5mm.

Edison LED Modules directly Mounting Options

Edison Opto_EdiPower® V, III HC, III HE/ CR170/ CR190, III SL Series :

- 2PHE15xxxxP34202; 2PHC20xxxxP34001; 2PSL30xxxxP13010;
- 2PHE18xxxxP34202; 2PHC30xxxxP34001;
- 2PHE24xxxxP34202; 2PHE20xxxxP34001;
- 2PHE30xxxxP34202; 2PHE30xxxxP34001;

With the Zhaga Book 3 holders for the green indicator marks.

BJB holder: 47.319.2021.50;

AAG.STUCCHI: 8101-G2

Without the holders for the red indicator marks.

Direct mounting with machine screws M3x6.5mm.

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Mounting Options and Drawings & Dimensions

Example: xLED-EDI-8030-B-1,2

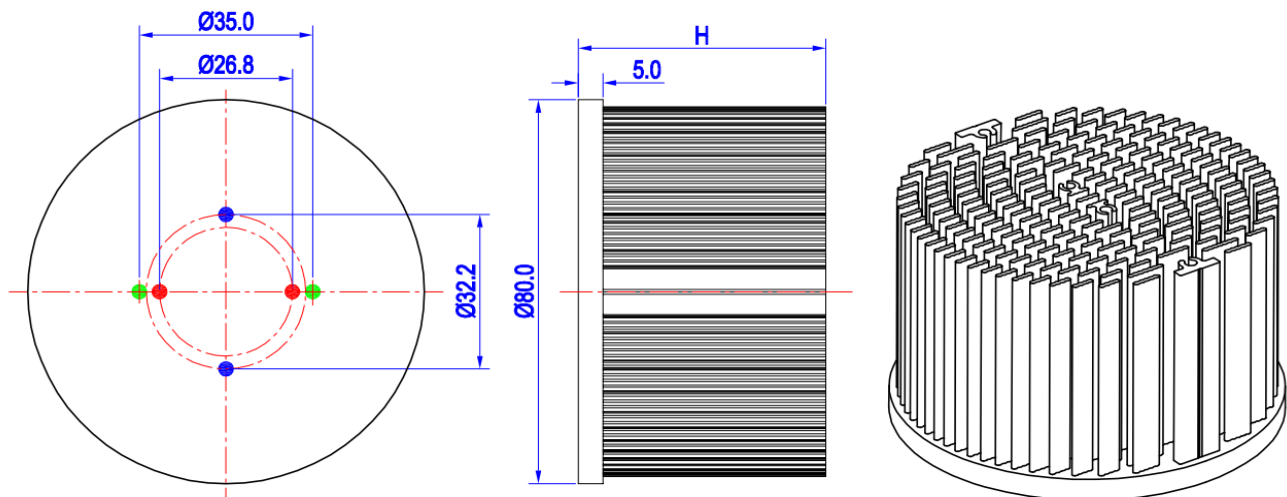
Example: xLED-EDI-80 **1** - **2** - **3**

- 1** Height (mm)
- 2** Anodising Color
 - B-Black
 - C-Clear
 - Z-Custom
- 3** Mounting Options - see graphics for details Combinations available
 Ex.order code - 12
 means option 1 and 2 combined

Notes:

- Mentioned models are an extraction of full product range.
- For specific mechanical adaptations please contact MingfaTech.
- MingfaTech reserves the right to change products or specifications without prior notice.


MOUNTING OPTION	Module type	Holder NO.	THREAD	THREAD DEPTH	THREAD HOLE DISTANCE
1	15~30W COB	/	M3	6.5mm	26.8mm/ 2-@180°
2		/	M3	6.5mm	32.2mm/ 2-@180°
3	27W, 33~40W COB	BJB Holder 47.319.2030.50	M3	6.5mm	35.0mm/ 2-@180° (Zhaga book 3)
		AAG.STUCCHI 8102-G2			
	15~30W COB	BJB Holder 47.319.2021.50			
		AAG.STUCCHI 8101-G2			



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xLED-EDI-8030 Pin Fin LED Heat Sink $\Phi 80\text{mm}$ for Edison

The product data table

	Model No.	xLED-EDI-8030
	Heatsink Size	$\Phi 80 \times H 30\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	140.0
	Dissipated power (T_{hs-amb},50°C)	16.0 (W)
	Cooling surface area (mm²)	72123
	Thermal Resistance (R_{hs-amb})	3.13 (°C/W)

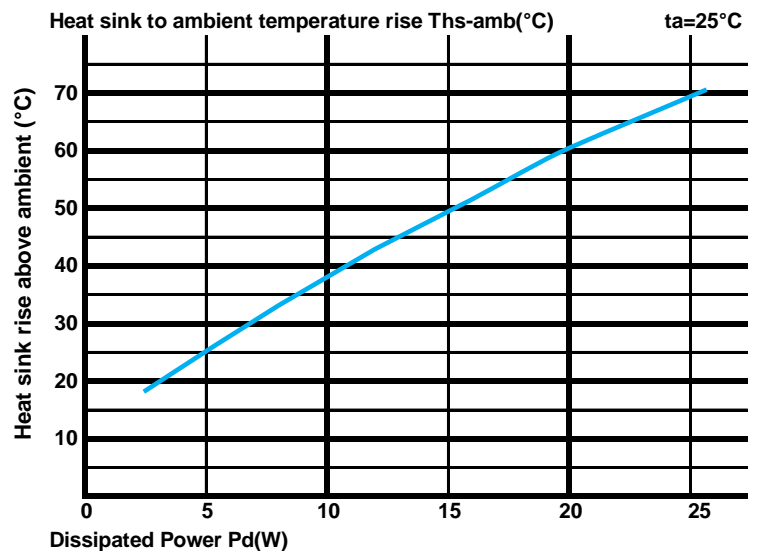
The thermal data table

* Please be aware the dissipated power Pd is not the same as the electrical power Pe of a LED module.

* To calculate the dissipated power please use the following formula: $P_d = P_e \times (1 - \eta_L)$.

Pd - Dissipated power ; Pe - Electrical power ; η_L = Light efficiency of the LED module;

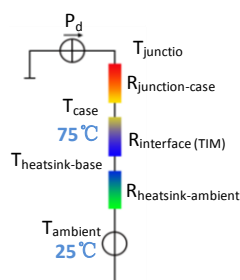
Dissipated Power Pd(W)	Pd = Pe x (1- η_L)	Heat sink to ambient thermal resistance R _{hs-amb} (°C/W)	Heat sink to ambient temperature rise T _{hs-amb} (°C)
		xLED-EDI-8030	
5.0		5.00	25.0
10.0		3.80	38.0
15.0		3.27	49.0
20.0		3.00	60.0
25.0		2.76	69.0



* The aluminum substrate side of the package outer shell is thermally connected to the heat sink via TIM (Thermal interface material).

MingFa 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 resistance is a heat property and a measurement of a temperature difference by which an object or material resists a heat flow.

Geometric shapes are different, the thermal resistance is different. Formula: $\theta = (T_{hs} - T_a) / P_d$

θ - Thermal Resistance [°C/W] ; T_{hs} - Heatsink temperature ; T_a - Ambient temperature ;

* The thermal resistance between the junction section of the light-emitting diode and the aluminum substrate side of the package outer shell is R_{junction-case}, the thermal resistance of the TIM outside the package is R_{interface (TIM)} [°C/W], the thermal resistance with the heat sink is R_{heatsink-ambient} [°C/W], and the ambient temperature is T_{ambient} [°C].

* Thermal resistances outside the package R_{interface (TIM)} and R_{heatsink-ambient} can be integrated into the thermal resistance R_{case-ambient} at this point. Thus, the following formula is also used:

$$T_{\text{junction}} = (R_{\text{junction-case}} + R_{\text{case-ambient}}) \cdot P_d + T_{\text{ambient}}$$