



for

LED



xLED

**xLED-EDI-6050 Pin Fin LED Heat Sink  $\Phi$ 60mm for Edison**

**Features VS Benefits**

- \* The xLED-EDI-6050 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 900 to 2,200 lumen.
- \* Thermal resistance range Rth 3.85°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of Edison COB series.
- \* Diameter 60.0mm - standard height 50.0mm 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 :

- 2PHE06xxxxP32202;
- 2PHE09xxxxP35202;
- 2PHC09xxxxP32001;
- 2PHE13xxxxP32001;
- 2PSL09xxxxP12010;

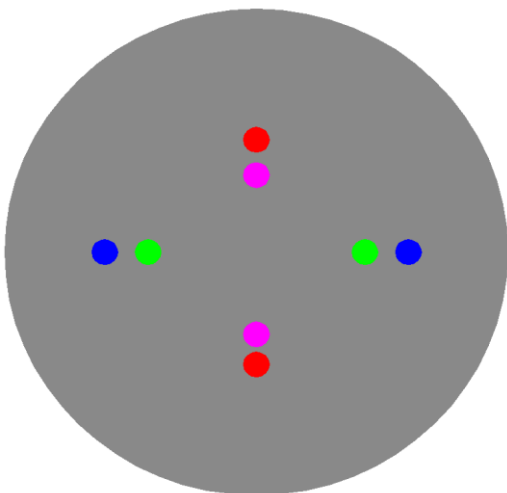
With the Zhaga Book 11 holders for the green indicator marks.  
 BJB holder: 47.319.6294.50;  
 AAG.STUCCHI: 8100-G2  
 Without the holders for the pink indicator marks.  
 Direct mounting with machine screws M3x6.5mm.

**Edison LED Modules directly Mounting Options**

Edison Opto\_EdiPower® V, III HC, III HE/ CR170/ CR190, III SL Series :

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

With the Zhaga Book 3 holders for the blue 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-6050-B-1,2

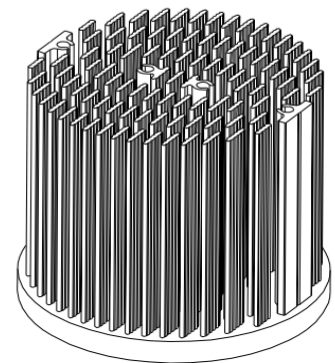
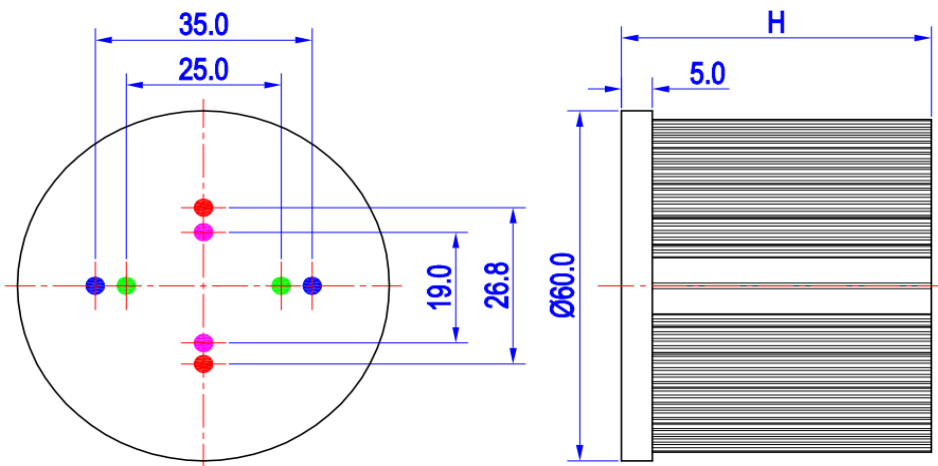
Example: xLED-EDI-60 **1** - **2** - **3**

- 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	9-13W COB	/	M3	6.5mm	19.0mm/ 2-@180°
2		BJB Holder 47.319.2021.50 AAG.STUCCHI 8101-G2	M3	6.5mm	25.0mm/ 2-@180° (Zhaga book 11)
3	15-30W COB	/	M3	6.5mm	26.8mm/ 2-@180°
4		BJB Holder 47.319.2021.50 AAG.STUCCHI 8101-G2	M3	6.5mm	35.0mm/ 2-@180° (Zhaga book 3)



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The product data table

	Model No.	xLED-EDI-6050
	Heatsink Size	$\Phi$ 60xH50mm
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	112.0
	Dissipated power (Ths-amb,50°C)	13.0 (W)
	Cooling surface area (mm <sup>2</sup> )	68473
	Thermal Resistance (Rhs-amb)	3.85 (°C/W)

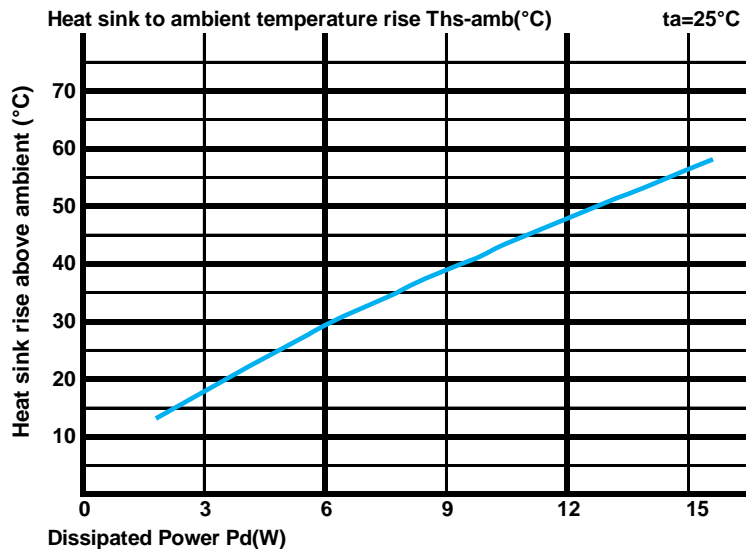
The thermal data table

\* 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: Pd = Pe x (1-ηL).

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

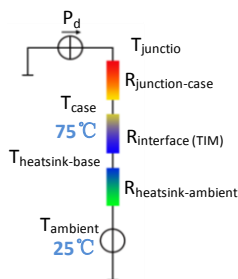
Dissipated Power Pd(W)	Heat sink to ambient thermal resistance Rhs-amb (°C/W)		Heat sink to ambient temperature rise Ths-amb (°C)	
	xLED-EDI-6050			
3.0	5.67	17.0		
6.0	4.83	29.0		
9.0	4.22	38.0		
12.0	4.00	48.0		
15.0	3.73	56.0		



\*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:  $\theta = (Ths - Ta) / Pd$

$\theta$  - Thermal Resistance [°C/W] ; Ths - Heatsink temperature ; Ta - 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  $R_{\text{junction-case}}$ , the thermal resistance of the TIM outside the package is  $R_{\text{interface (TIM)}}$  [°C/W], the thermal resistance with the heat sink is  $R_{\text{heatsink-ambient}}$  [°C/W], and the ambient temperature is  $T_{\text{ambient}}$  [°C].

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

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