



LED

xLED

xLED-EDI-4550 Pin Fin LED Heat Sink Φ 45mm for Edison

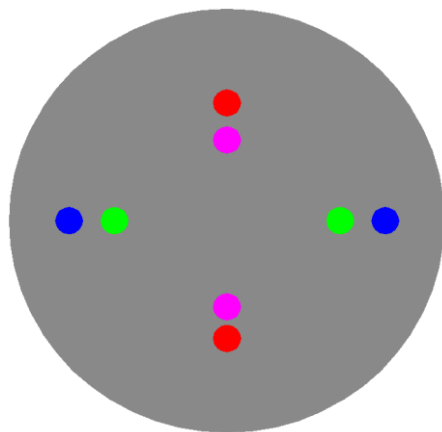
Features VS Benefits

- * The xLED-EDI-4550 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 400 to 1,500 lumen.
- * Thermal resistance range Rth 5.55°C/W.
- * Modular design with mounting holes foreseen for direct mounting of Edison COB series.
- * Diameter 45.0mm - 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;
- 2PHC20xxxxP34001;
- 2PSL30xxxxP13010;
- 2PHE18xxxxP34202;
- 2PHC30xxxxP34001;
- 2PHE24xxxxP34202;
- 2PHE20xxxxP34001;
- 2PHE30xxxxP34202;
- 2PHE30xxxxP34001;

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-4550-B-1,2

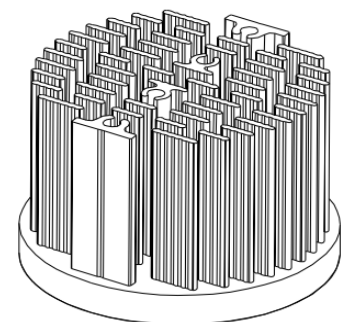
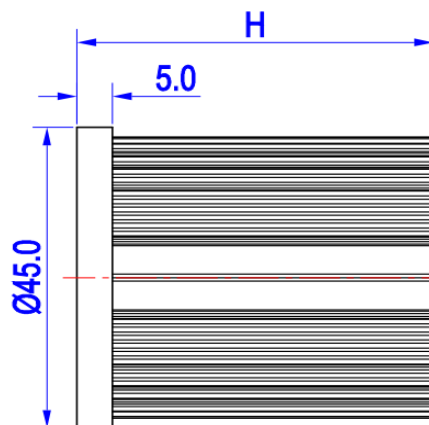
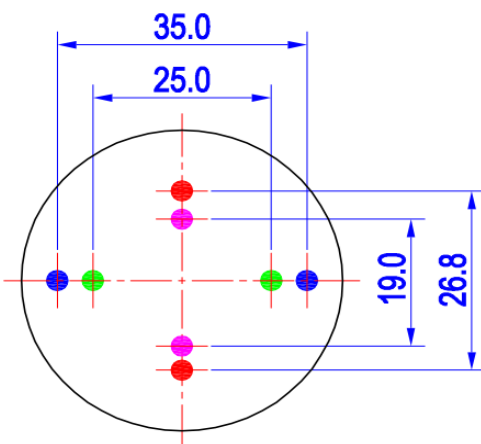
Example: xLED-EDI-45 **1** - **2** - **3**

- 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)





for

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The product data table

	Model No.	xLED-EDI-4550
	Heatsink Size	Φ45xH50mm
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	63.5
	Dissipated power (Ths-amb,50°C)	9.0 (W)
	Cooling surface area (mm²)	37985
	Thermal Resistance (Rhs-amb)	5.55 (°C/W)

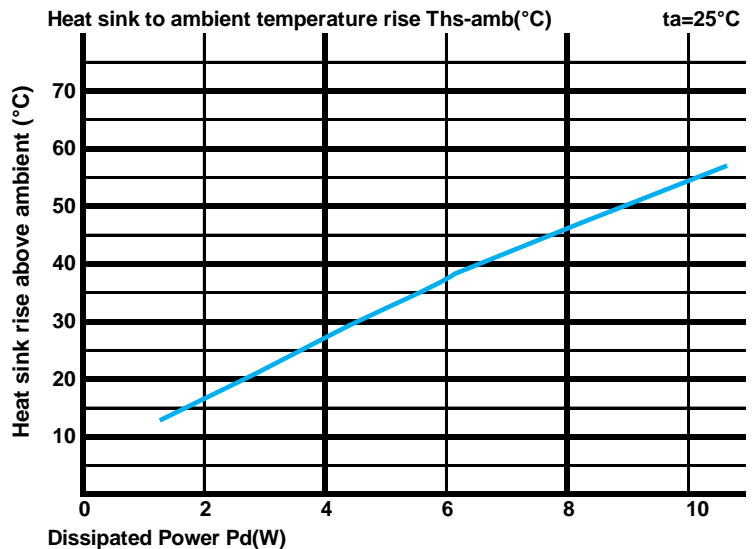
The thermal data table

* 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;

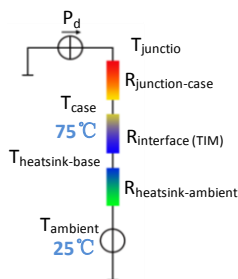
Dissipated Power Pd(W)	Pd = Pe x (1-ηL)	Heat sink to ambient thermal resistance Rhs-amb (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
		xLED-EDI-4550	
2.0		8.00	16.0
4.0		6.50	26.0
6.0		6.17	37.0
8.0		5.75	46.0
10.0		5.40	54.0



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

θ - 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 $R_{junction-case}$, 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:

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

