

GooLED

GooLED-CRE-8650 Pin Fin Heat Sink Φ 86.5mm for Cree

Features VS Benefits

- * The GooLED-CRE-8650 Cree Pin Fin LED Heat Sinks are specifically designed for luminaires using the Cree 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 1,600 to 4,400 lumen.
- * Thermal resistance range Rth 1.85°C/W.
- * Modular design with mounting holes foreseen for direct mounting of Cree® XLamp® COB series.
- * Diameter 86.5mm - standard height 50mm 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 Cree 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.



Cree LED Modules directly Mounting Options

Cree® XLamp® COB Series:

- Xlamp CXA 25xx;
- Xlamp CXB 25xx;

With the Zhaga Book 3 holders for the green indicator marks.
 IDEAL Holder:50-2102CR;
 BJB Holder:47.319.2141.50;
 AAG.STUCCHI holder:8401-G2;
 Direct mounting with machine screws M3x6.5mm.

With the LEDiL products:
 Olivia series: FN14637-S; FN14828-M;
 Ronda series: FN15xxx-xx;

Cree® XLamp® COB Series:

- Xlamp CXA 18xx;
- Xlamp CXB 18xx;

With the Zhaga Book 3 holders for the green indicator marks.
 IDEAL Holder:50-2101CR;
 BJB Holder:47.319.2131.50;
 Direct mounting with machine screws M3x6.5mm.

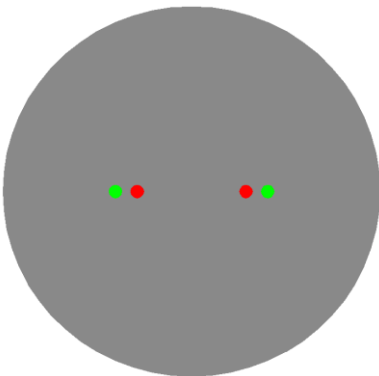
With the LEDiL products:
 Olivia series: FN14637-S; FN14828-M;
 Ronda series: FN15xxx-xx;

Cree® XLamp® COB Series:

- Xlamp CXA 15xx;
- Xlamp CXB 15xx;

With the Zhaga Book 11 holders for the red indicator marks.
 IDEAL Holder:50-2001CR;
 BJB Holder:47.319.6104.50;
 AAG.STUCCHI holder:8400-G2;
 Direct mounting with machine screws M3x6.5mm.

With the LEDiL products:
 Ronda series: FN15xxx-xx;



Mounting Options and Drawings & Dimensions

Example:GooLED-CRE-8650-B-1,2

Example:GooLED-CRE-86 **1** - **2** - **3**

1 Height (mm)

2 Anodising Color

B-Black

C-Clear

Z-Custom

3 Mounting Options - see graphics for details Combinations available

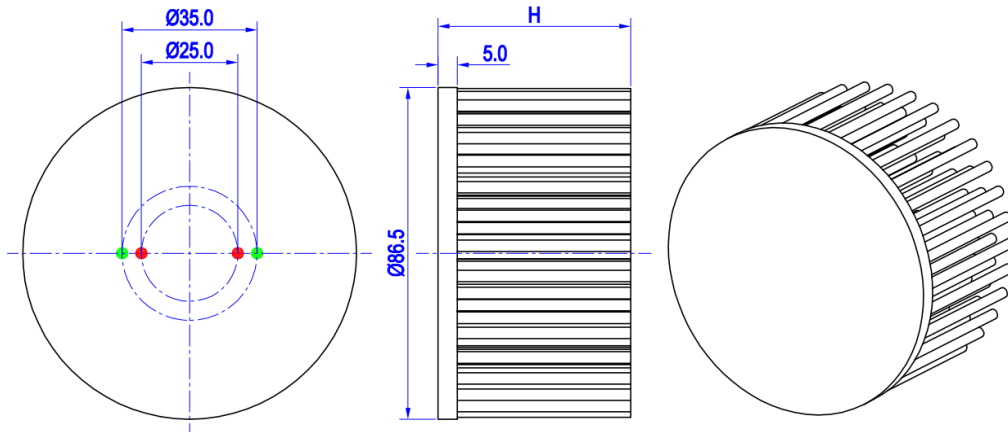
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means option 1 and 2 combined

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.	LEDiL products		THREAD	THREAD DEPTH	THREAD HOLE DISTANCE
			Olivia series	Ronda series			
1	Xlamp CXA 15xx; Xlamp CXB 15xx;	BJB Holder 47.319.6104.50	/		M3	6.5mm	25.0mm/ 2-@180° (Zhaga Book 11)
		AAG.STUCCHI 8400-G2					
		IDEAL Holder 50-2001CR					
2	Xlamp CXA 18xx; Xlamp CXB 18xx;	BJB Holder 47.319.2131.50	FN14637-S; FN14828-M;	FN15xxx-xx;	M3	6.5mm	35.0mm/ 2-@180° (Zhaga Book 3)
		IDEAL Holder 50-2101CR					
	Xlamp CXA 25xx; Xlamp CXB 25xx;	BJB Holder 47.319.2141.50					
		AAG.STUCCHI 8401-G2					
		IDEAL Holder 50-2102CR					



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GooLED-CRE-8650 Pin Fin Heat Sink $\Phi 86.5\text{mm}$ for Cree

The product data table

	Model No.	GooLED-CRE-8650
	Heatsink Size	$\Phi 86.5 \times H50\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	210.0
	Dissipated power (T_{hs-amb},50°C)	27.0 (W)
	Cooling surface area (mm²)	77577
	Thermal Resistance (R_{hs-amb})	1.85 (°C/W)

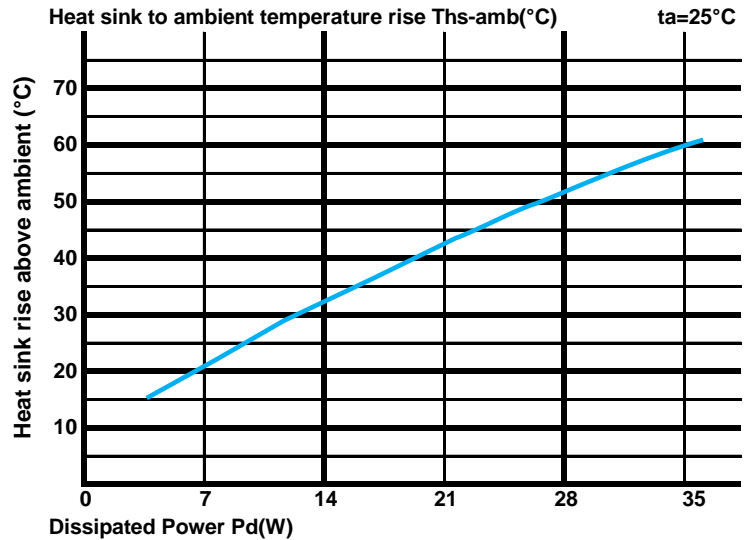
The thermal data table

* 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: $P_d = P_e \times (1 - \eta_L)$.

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

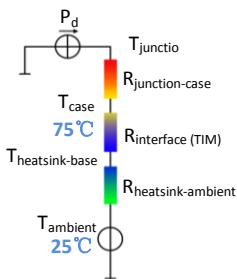
Dissipated Power Pd(W)	Pd = Pe x (1- η_L)	Heat sink to ambient thermal resistance R _{hs-amb} (°C/W)	Heat sink to ambient temperature rise T _{hs-amb} (°C)
		GooLED-CRE-8650	
7.0		2.86	20.0
14.0		2.21	31.0
21.0		2.00	42.0
28.0		1.82	51.0
35.0		1.69	59.0



*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:

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