

GooLED

GooLED-CRE-8665 Pin Fin Heat Sink Φ 86.5mm for Cree

Features VS Benefits

- * The GooLED-CRE-8665 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 1,800 to 5,200 lumen.
- * Thermal resistance range R_{th} 1.56°C/W.
- * Modular design with mounting holes foreseen for direct mounting of Cree® XLamp® COB series.
- * Diameter 86.5mm - standard height 65.0mm 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 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.

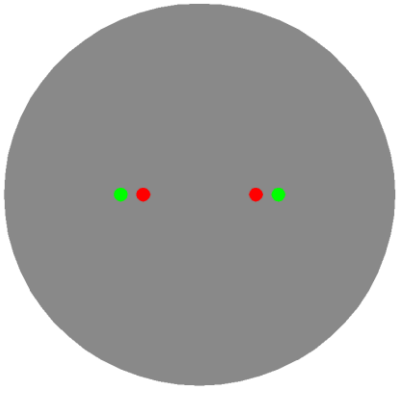
With the LEDiL products:
 Olivia series: FN14637-S; FN14828-M;
 Ronda series: FN15xxx-xx;

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-8665-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

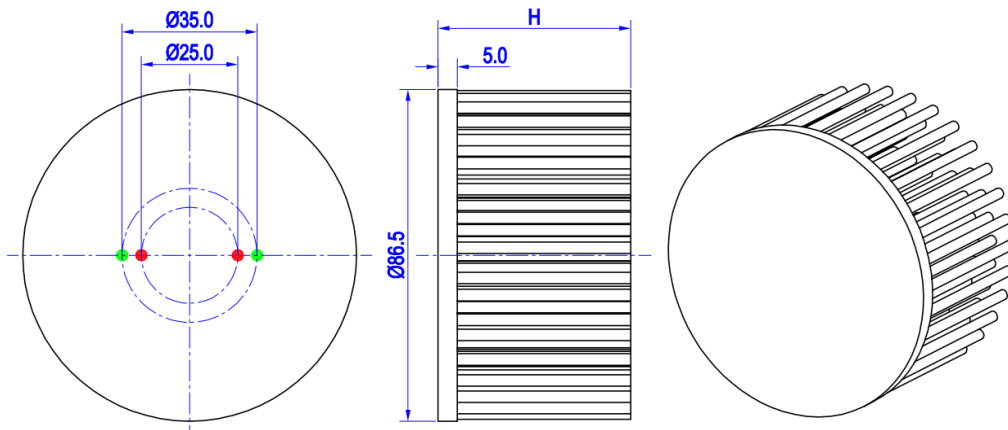
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means option 1 and 2 combined

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-8665 Pin Fin Heat Sink $\Phi 86.5\text{mm}$ for Cree

The product data table

	Model No.	GooLED-CRE-8665
	Heatsink Size	$\Phi 86.5 \times H65\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	293.0
	Dissipated power ($T_{hs-amb}, 50^\circ\text{C}$)	32.0 (W)
	Cooling surface area (mm^2)	95583
	Thermal Resistance (R_{hs-amb})	1.56 ($^\circ\text{C}/\text{W}$)

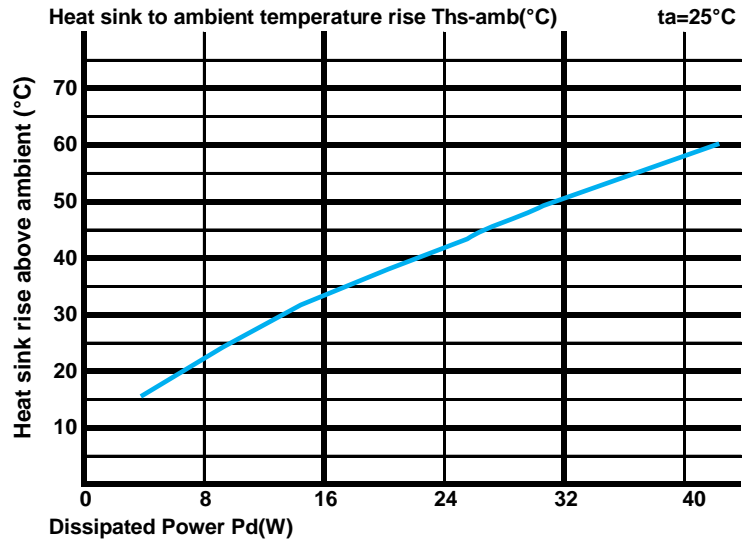
The thermal data table

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

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

P_d - Dissipated power ; P_e - Electrical power ; η_L = Light efficiency of the LED module;

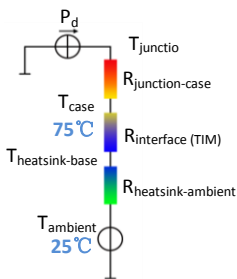
Dissipated Power P_d (W)	$P_d = P_e \times (1 - \eta_L)$	Heat sink to ambient thermal resistance R_{hs-amb} ($^\circ\text{C}/\text{W}$)	Heat sink to ambient temperature rise T_{hs-amb} ($^\circ\text{C}$)
		GooLED-CRE-8665	
8.0		2.75	22.0
16.0		2.13	34.0
24.0		1.75	42.0
32.0		1.56	50.0
40.0		1.45	58.0



*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 [$^\circ\text{C}/\text{W}$] ; 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 $R_{interface (TIM)}$ [$^\circ\text{C}/\text{W}$], the thermal resistance with the heat sink is $R_{heatsink-ambient}$ [$^\circ\text{C}/\text{W}$], and the ambient temperature is $T_{ambient}$ [$^\circ\text{C}$].

*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:

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