

GooLED

GooLED-CRE-6830 Pin Fin Heat Sink Φ 68mm for Cree

Features VS Benefits

- * The GooLED-CRE-6830 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 800 to 2,100 lumen.
- * Thermal resistance range Rth 4.0°C/W.
- * Modular design with mounting holes foreseen for direct mounting of Cree® XLamp® COB series.
- * Diameter 68mm - standard height 30mm, 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:

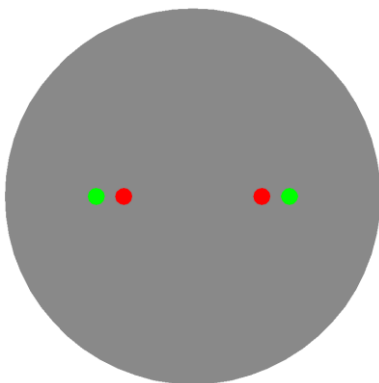
- Xlamp CXA 13xx;
- Xlamp CXB 13xx;
- With the Zhaga Book 11 holders for the green indicator marks.
- IDEAL Holder:50-2100CR;
- BJB Holder:47.319.6020.50;
- Direct mounting with machine screws M3x6.5mm.
- With the LEDiL products:
- Olivia series: FN14637-S; FN14828-M;
- Ronda series: FN15xxx-xx;

Cree® XLamp® COB Series:

- Xlamp CXA 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;





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Mounting Options and Drawings & Dimensions

Example:GooLED-CRE-6830-B-1,2

Example:GooLED-CRE-68 **1** - **2** - **3**

1 Height (mm)

2 Anodising Color

B-Black

C-Clear

Z-Custom

3 Mounting Options - see graphics for details Combinations available

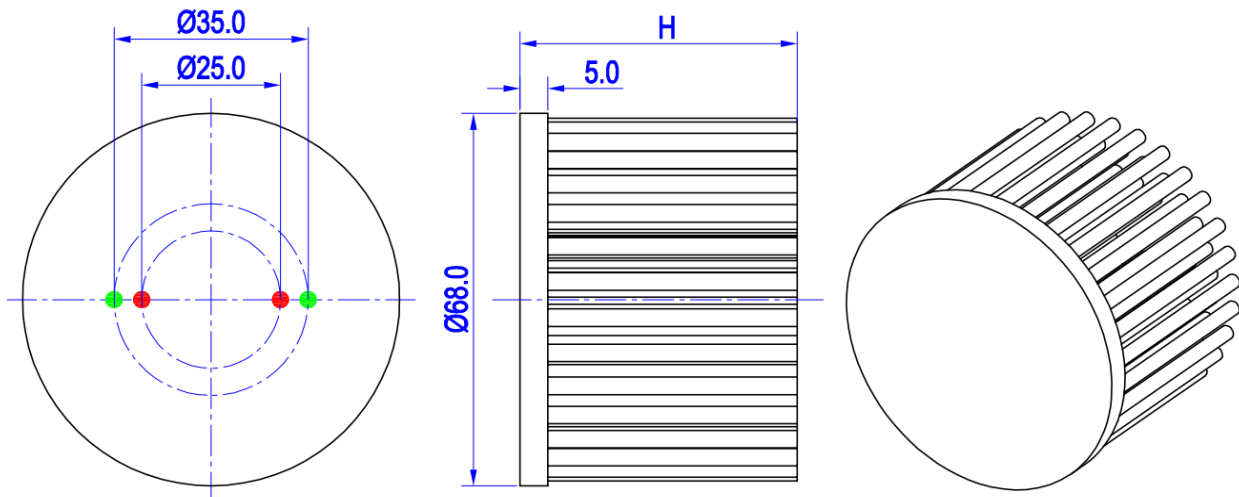
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means option 1 and 2 combined

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 13xx; Xlamp CXB 13xx;	BJB Holder 47.319.6104.50	FN14637-S;	FN15xxx-xx;	M3	6.5mm	25.0mm/ 2-@180° (Zhaga Book 11)
		IDEAL Holder 50-2001CR					
	Xlamp CXA 15xx; Xlamp CXB 15xx;	BJB Holder 47.319.6104.50	/				
		AAG.STUCCHI 8400-G2					
2	Xlamp CXA 18xx; Xlamp CXB 18xx;	IDEAL Holder 50-2001CR	FN14637-S; FN14828-M;	M3	6.5mm	35.0mm/ 2-@180° (Zhaga Book 3)	
		BJB Holder 47.319.2131.50					



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The product data table

	Model No.	GooLED-CRE-6830
	Heatsink Size	$\Phi 68 \times H 30\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	108.0
	Dissipated power (T _{hs-amb} , 50°C)	12.5 (W)
	Cooling surface area (mm ²)	36775
	Thermal Resistance (R _{hs-amb})	4.0 (°C/W)

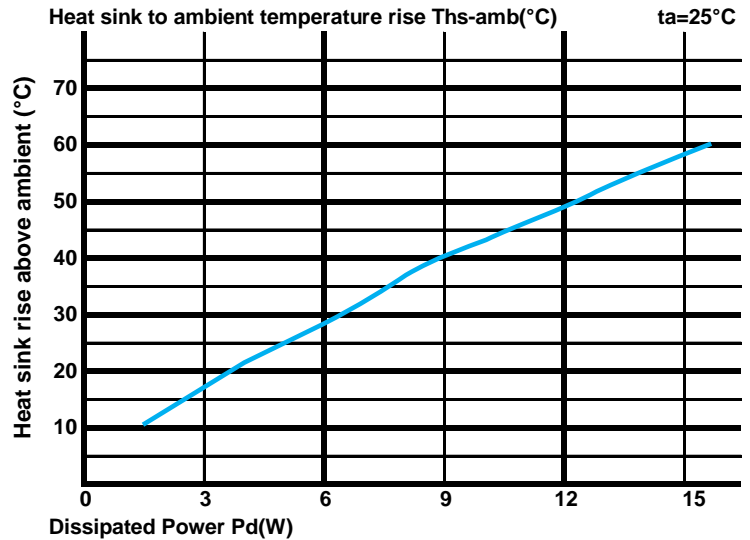
The thermal data table

* 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;

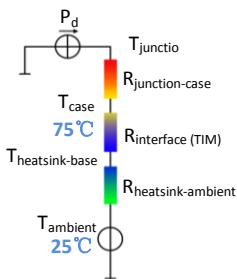
Dissipated Power Pd(W)	Pd = Pe x (1- η_L)	Heat sink to ambient thermal resistance R _{hs-amb} (°C/W)	Heat sink to ambient temperature rise T _{hs-amb} (°C)
		GooLED-CRE-6830	
3.0		5.67	17.0
6.0		4.67	28.0
9.0		4.44	40.0
12.0		4.08	49.0
15.0		3.87	58.0



*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 [°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:

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