

**GooLED**

**GooLED-CRE-5830 Pin Fin Heat Sink  $\Phi$ 58mm for Cree**

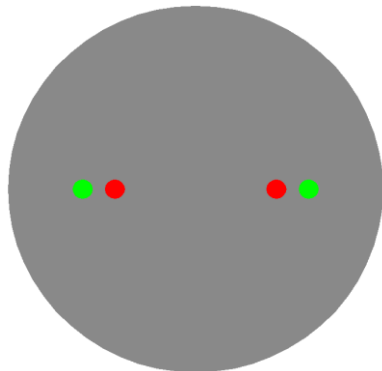
**Features VS Benefits**

- \* The GooLED-CRE-5830 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 500 to 1,600 lumen.
- \* Thermal resistance range Rth 5.0°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of Cree® XLamp® COB series.
- \* Diameter 58mm - 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;



*GooLED*

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### Mounting Options and Drawings & Dimensions

Example:GooLED-CRE-5830-B-1,2

Example:GooLED-CRE-58 **1** - **2** - **3**

**1** Height (mm)

**2** Anodising Color

B-Black

C-Clear

Z-Custom

**3** Mounting Options - see graphics for details Combinations available

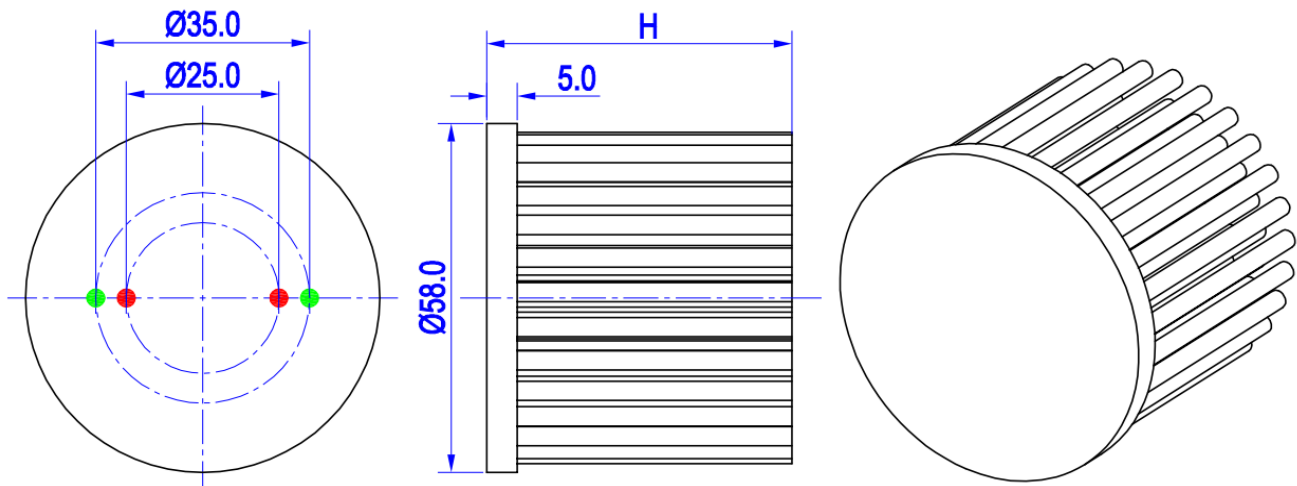
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means option 1 and 2 combined

**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					



## GooLED

### GooLED-CRE-5830 Pin Fin Heat Sink $\Phi 58\text{mm}$ for Cree

#### The product data table

	Model No.	GooLED-CRE-5830
	Heatsink Size	$\Phi 58 \times H 30\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	79.0
	Dissipated power ( $T_{hs-amb, 50^\circ\text{C}}$ )	10.0 (W)
	Cooling surface area ( $\text{mm}^2$ )	27134
	Thermal Resistance ( $R_{hs-amb}$ )	5.0 ( $^\circ\text{C/W}$ )

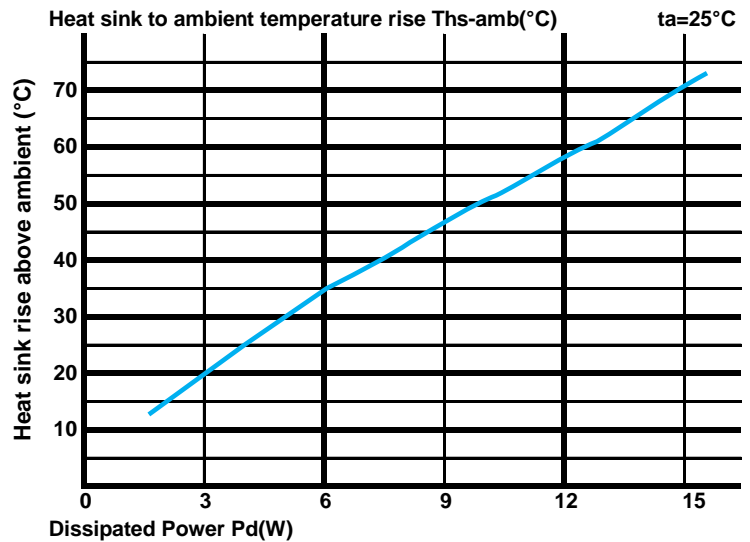
#### The thermal data table

\* 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 ;  $\eta_L$  = Light efficiency of the LED module;

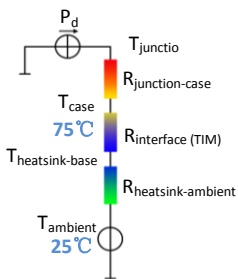
Dissipated Power $P_d$ (W)	$P_d = P_e \times (1 - \eta_L)$	Heat sink to ambient thermal resistance $R_{hs-amb}$ ( $^\circ\text{C/W}$ )	Heat sink to ambient temperature rise $T_{hs-amb}$ ( $^\circ\text{C}$ )
		GooLED-CRE-5830	
3.0		6.67	20.0
6.0		5.83	35.0
9.0		5.11	46.0
12.0		4.75	57.0
15.0		4.67	70.0



\*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:  $\theta = (T_{hs} - T_a) / P_d$

$\theta$  - Thermal Resistance [ $^\circ\text{C/W}$ ];  $T_{hs}$  - 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) [ $^\circ\text{C/W}$ ], the thermal resistance with the heat sink is  $R_{heatsink-ambient}$  [ $^\circ\text{C/W}$ ], 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:

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