

xLED

xLED-CRE-6030 Pin Fin Heat Sink Φ 60mm for Cree

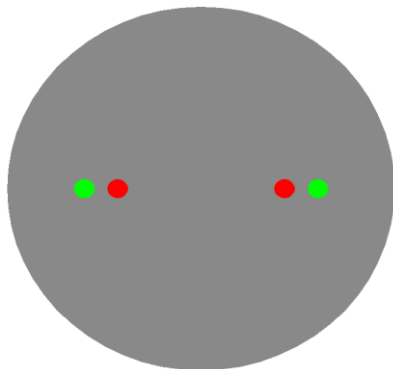
Features VS Benefits

- * The xLED-CRE-6030 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 60mm - 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 3 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:xLED-CRE-6030-B-1,2

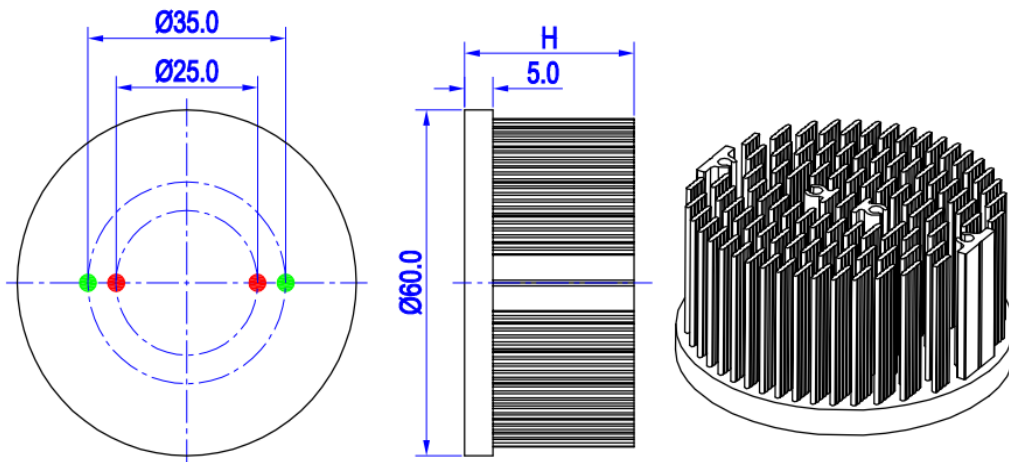
Example:xLED-CRE-60 **1** - **2** - **3**

- 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.	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 IDEAL Holder 50-2001CR					
2	Xlamp CXA 18xx; Xlamp CXB 18xx;	BJB Holder 47.319.2131.50	FN14637-S; FN14828-M;	M3	6.5mm	35.0mm/ 2-@180° (Zhaga Book 3)	
		IDEAL Holder 50-2101CR					



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The product data table

	Model No.	xLED-CRE-6030
	Heatsink Size	$\Phi 60 \times H 30\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	80.0
	Dissipated power ($T_{hs-amb}, 50^\circ\text{C}$)	10.0 (W)
	Cooling surface area (mm^2)	40973
	Thermal Resistance (R_{hs-amb})	5.0 ($^\circ\text{C/W}$)

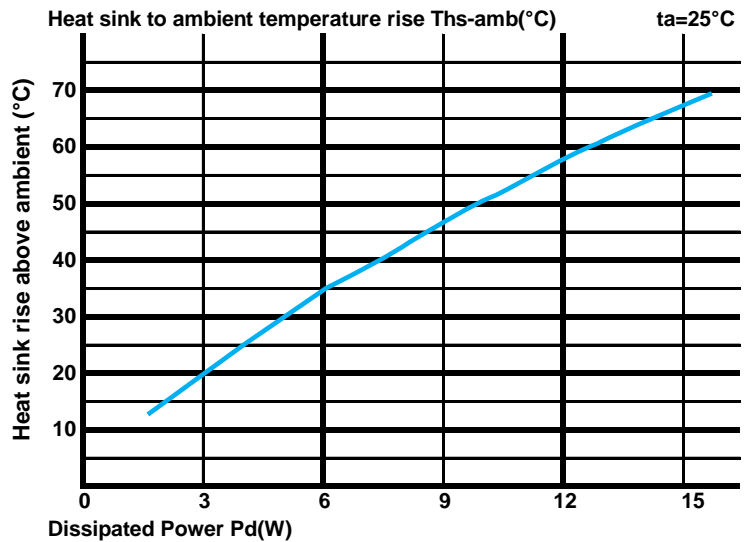
The thermal data table

* 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 ; η_L = Light efficiency of the LED module;

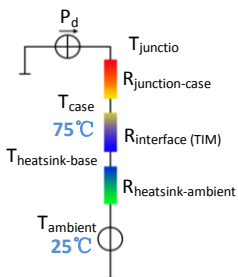
Dissipated Power P_d (W)	$P_d = P_e \times (1 - \eta_L)$	Heat sink to ambient thermal resistance R_{hs-amb} ($^\circ\text{C/W}$)	Heat sink to ambient temperature rise T_{hs-amb} ($^\circ\text{C}$)
		xLED-CRE-6030	
3.0		6.67	20.0
6.0		5.67	34.0
9.0		5.11	46.0
12.0		4.83	58.0
15.0		3.80	57.0



*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 [$^\circ\text{C/W}$] ; 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:

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