



LED

xLED

xLED-LUME-8050 Pin Fin Heat Sink Φ 80mm for Lumens

Features VS Benefits

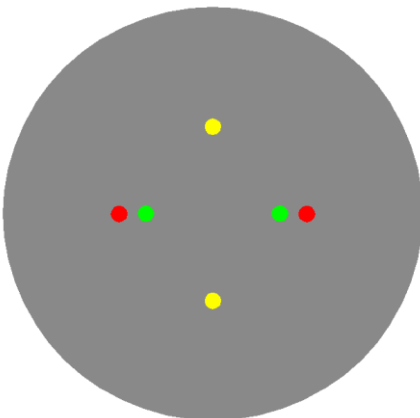
- * The xLED-LUME-8050 Lumens Pin Fin LED Heat Sinks are specifically designed for luminaires using the Lumens LED engines.
- * Mechanical compatibility with direct mounting of the LED engines to the LED cooler and thermal performance matching the lumen packages.
- * For spotlight and downlight designs from 1,100 to 3,400 lumen.
- * Thermal resistance range Rth 2.38°C/W.
- * Modular design with mounting holes foreseen for direct mounting of Lumens Ergon COB series, and AC-ALL series LED engines.
- * Diameter 80.0mm - standard height 50.0mm 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 Lumens 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.

LUMENS



Lumens LED Modules directly Mounting Options

Lumens Ergon COB_HO, COB_HO+, COB_HE Series :

- ERC1812xxxxHO; ERC1812xxxxHE;
- ERC1820xxxxHO; ERC1820xxxxHE;

With the Zhaga Book 3 holders for the red indicator marks.
(Ideal Holder:50-2101CR); (BJB holder:47.319.2131.50);
Without the holders for the green indicator marks.
Direct mounting with machine screws M3x6.5mm.

Lumens Ergon COB_HO, COB_HO+, COB_HE Series :

- ERC2520xxxxHO; ERC2530xxxxHE;
- ERC2530xxxxHO; ERC2540xxxxHE;
- ERC2540xxxxHO; ERC2530xxxxHO+
- ERC2520xxxxHO+

With the Zhaga Book 3 holders for the red indicator marks.
(Ideal Holder:50-2102CR); (BJB Holder:47.319.2141.50);
Without the holders for the yellow indicator marks.
Direct mounting with machine screws M3x6.5mm.

Lumens AC-ALL Series :

- EDC/47C/15W /xxx/120V/B; EDC/47C/15W /xxx/230V/A;
- EDC/57C/20W /xxx/120V/B; EDC/57C/20W /xxx/230V/A;
- EDC/57C/30W /xxx/120V/B; EDC/57C/30W /xxx/230V/A;

With the Zhaga Book 3 holders for the red indicator marks.
Direct mounting with machine screws M3x6.5mm.
Please refer to the www.lumensleds.com data provided on the manual.

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Mounting Options and Drawings & Dimensions

Example:xLED-LUME-8050-B-1,2

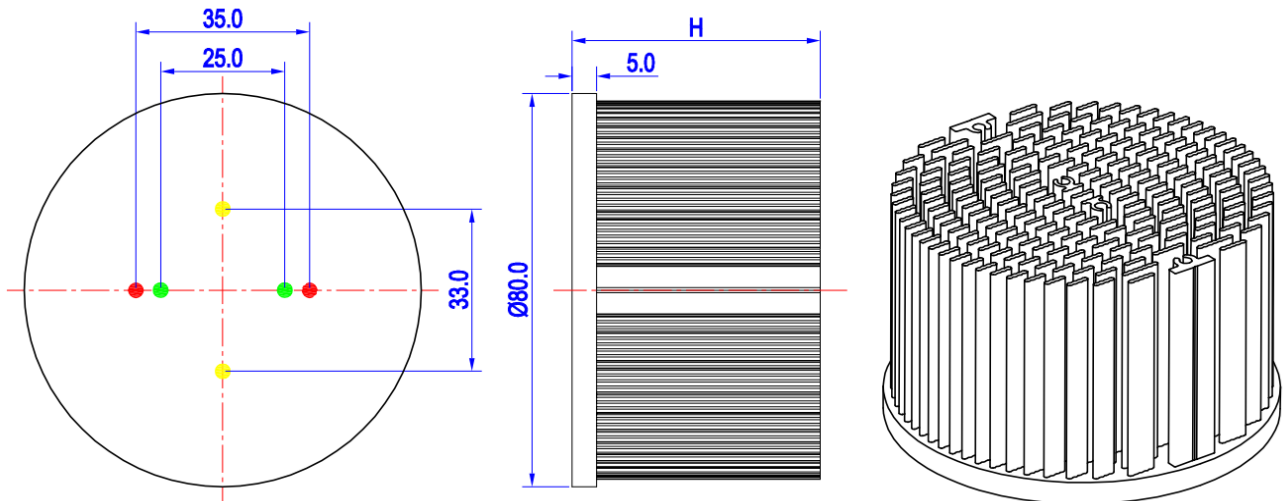
Example:xLED-LUME-80 **1** - **2** - **3**

- 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.	THREAD	THREAD DEPTH	THREAD HOLE DISTANCE
1	Ergon COB (17.85x17.85)	/	M3	6.5mm	25.0mm/ 2-@180°
2	Ergon COB (23.85x23.85)	/	M3	6.5mm	33.0mm/ 2-@180°
3	AC-ALL Series	Lumens	M3	6.5mm	35.0mm/ 2-@180° (Zhaga book 3)
	Ergon COB (17.85x17.85)	BJB Holder 47.319.2131.50			
		Ideal Holder 50-2101CR			
	Ergon COB (23.85x23.85)	BJB Holder 47.319.2141.50			
Ideal Holder 50-2102CR					



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xLED-LUME-8050 Pin Fin Heat Sink $\Phi 80\text{mm}$ for Lumens

The product data table

	Model No.	xLED-LUME-8050
	Heatsink Size	$\Phi 80 \times H 50\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	197.0
	Dissipated power (Ths-amb,50°C)	21.0 (W)
	Cooling surface area (mm²)	120774
	Thermal Resistance (Rhs-amb)	2.38 (°C/W)

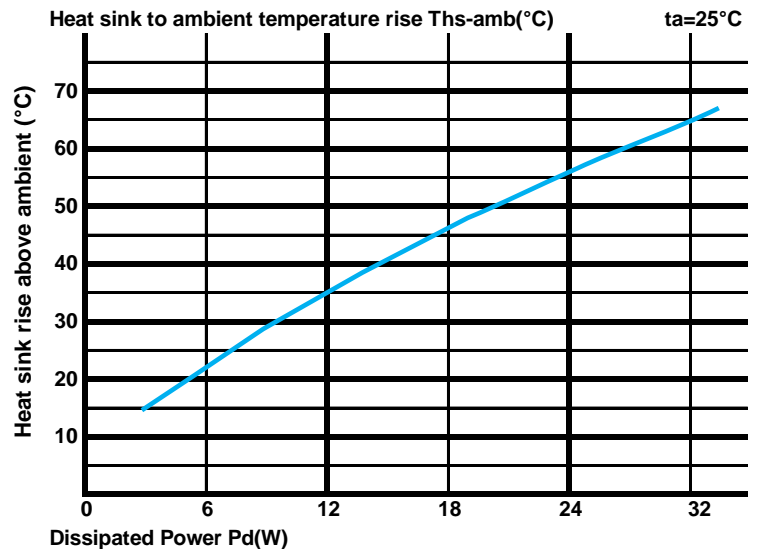
The thermal data table

* 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;

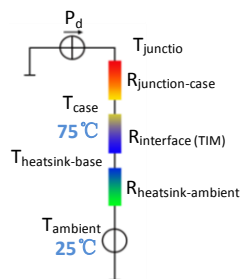
Dissipated Power Pd(W)	Heat sink to ambient thermal resistance Rhs-amb (°C/W)		Heat sink to ambient temperature rise Ths-amb (°C)	
	xLED-LUME-8050			
6.0	3.50	21.0		
12.0	2.92	35.0		
18.0	2.56	46.0		
24.0	2.29	55.0		
32.0	2.00	64.0		



*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 $R_{\text{junction-case}}$, the thermal resistance of the TIM outside the package is $R_{\text{interface (TIM)}}$ [°C/W], the thermal resistance with the heat sink is $R_{\text{heatsink-ambient}}$ [°C/W], and the ambient temperature is T_{ambient} [°C].

*Thermal resistances outside the package $R_{\text{interface (TIM)}}$ and $R_{\text{heatsink-ambient}}$ can be integrated into the thermal resistance $R_{\text{case-ambient}}$ at this point. Thus, the following formula is also used:

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