



for

LED



GooLED

GooLED-LUM-8650 Pin Fin Heat Sink Φ 86.5mm for LumiLEDs

Features VS Benefits

- * The GooLED-LUM-8650 LumiLEDs Pin Fin LED Heat Sinks are specifically designed for luminaires using the LumiLEDs 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 1,600 to 4,400 lumen.
- * Thermal resistance range R_{th} 1.85°C/W.
- * Modular design with mounting holes foreseen for direct mounting of LumiLEDs COB series.
- * Diameter 86.5mm - standard height 50mm 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 LumiLEDs 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.



LumiLEDs LED Modules directly Mounting Options

LumiLEDs COB series.

- LUXEON CoB 1216: L2C5-xxxx1216E2300;
- LUXEON CoB 1211: L2C5-xxxx1211E1900;

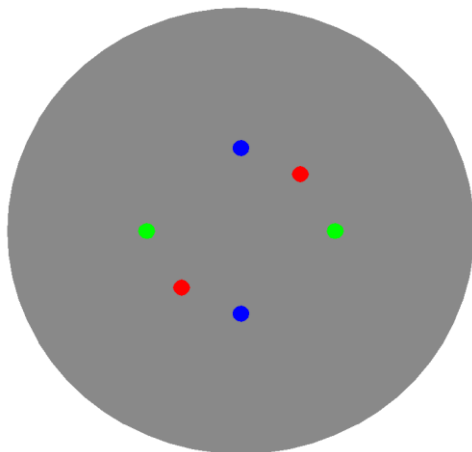
With the Zhaga Book 3 holders for the green indicator marks.
 TE Connectivity Holder: 2213480-1;
 BJB Holder: 47.319.2030.50;
 Without the holders for the blue indicator marks.
 Direct mounting with machine screws M3x6.5mm.

LumiLEDs COB series.

- LUXEON CoB 1208: L2C5-xxxx1208E1500;
- LUXEON CoB 1205: L2C5-xxxx1205E1300;

With the Zhaga Book 3 holders for the green indicator marks.
 TE Connectivity Holder: 2213130-1;
 BJB Holder: 47.319.2011.50;
 Without the holders for the red indicator marks.
 Direct mounting with machine screws M3x6.5mm.

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





GooLED

GooLED-LUM-8650 Pin Fin Heat Sink Φ 86.5mm for LumiLEDs

Mounting Options and Drawings & Dimensions

Example:GooLED-LUM-8650-B-1,2

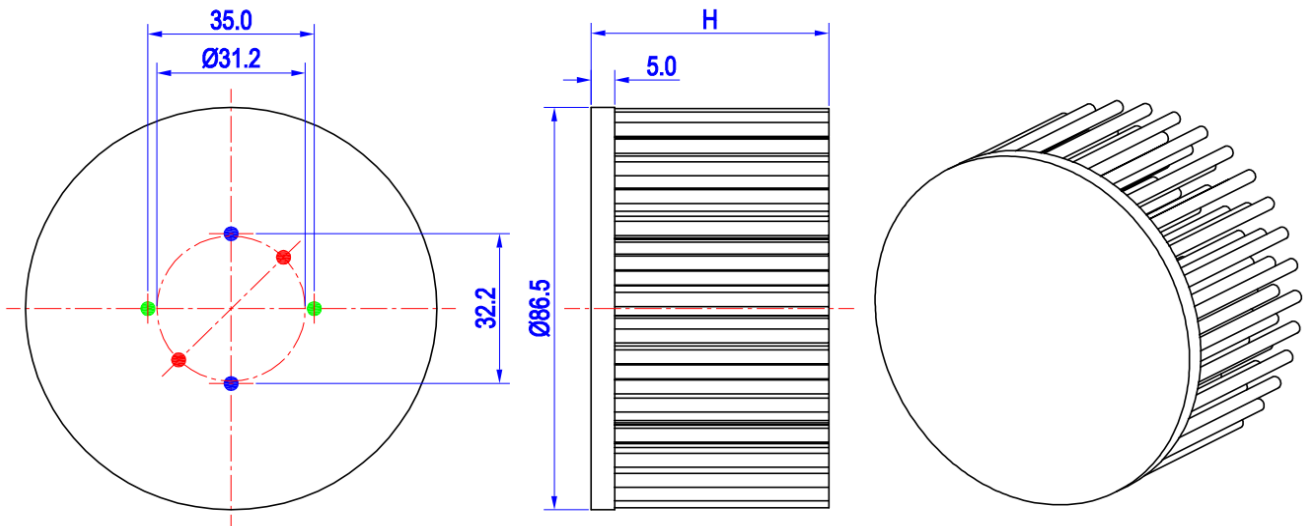
Example:GooLED-LUM-86 **1** - **2** - **3**

- 1** Height (mm)
- 2** Anodising Color
B-Black
C-Clear
Z-Custom
- 3** Mounting Options - see graphics for details Combinations available
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
			Stella Series	Olivia series			
1	LUXEON 1205; LUXEON 1208;	/	/	FN14637-S; FN14828-M;	M3	6.5mm	31.2mm/ 2-@180°
2	LUXEON 1211; LUXEON 1216;	/			M3	6.5mm	32.2mm/ 2-@180°
3	LUXEON 1205; LUXEON 1208; LUXEON 1211; LUXEON 1216;	BJB Holder 47.319.2011.50 TE Holder 2213130-1 BJB Holder 47.319.2030.50 TE Holder 2213480-1			M3	6.5mm	35.0mm/ 2-@180° (Zhaga Book 3)



GooLED

GooLED-LUM-8650 Pin Fin Heat Sink $\Phi 86.5\text{mm}$ for LumiLEDs

The product data table

	Model No.	GooLED-LUM-8650
	Heatsink Size	$\Phi 86.5 \times H50\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	210.0
	Dissipated power ($T_{hs-amb}, 50^\circ\text{C}$)	27.0 (W)
	Cooling surface area (mm^2)	77577
	Thermal Resistance (R_{hs-amb})	1.85 ($^\circ\text{C}/\text{W}$)

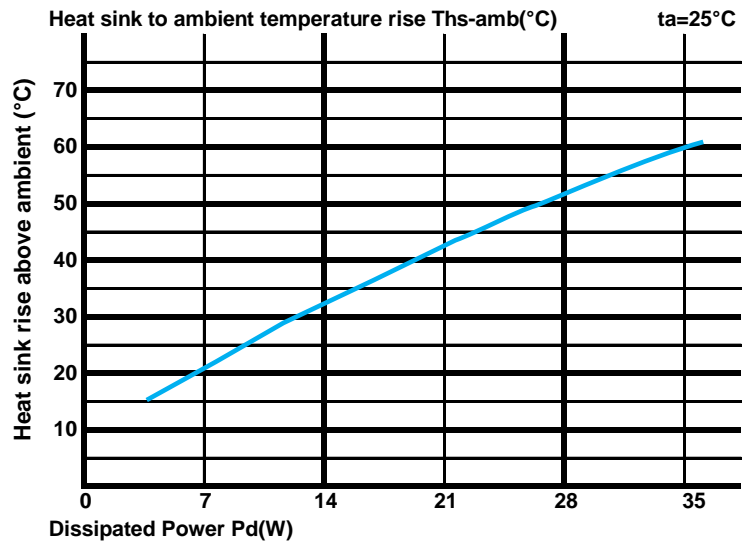
The thermal data table

* 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-LUM-8650	
7.0		2.86	20.0
14.0		2.21	31.0
21.0		2.00	42.0
28.0		1.82	51.0
35.0		1.69	59.0



*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:

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