



for

LED



GooLED

GooLED-LUM-7850 Pin Fin Heat Sink Φ 78mm for LumiLEDs

Features VS Benefits

- * The GooLED-LUM-7850 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 1,200 to 3,500 lumen.
- * Thermal resistance range R_{th} 2.33°C/W.
- * Modular design with mounting holes foreseen for direct mounting of LumiLEDs COB series.
- * Diameter 78mm - 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 1205HD: L2C5-xxxx1205E1100;
- LUXEON CoB 1204HD: L2C5-xxxx1204E0900

With the Zhaga Book 3 holders for the green indicator marks.
TE Connectivity Holder: 2213382-1;
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;
- LUXEON CoB 1204: L2C5-xxxx1204E1300;

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.

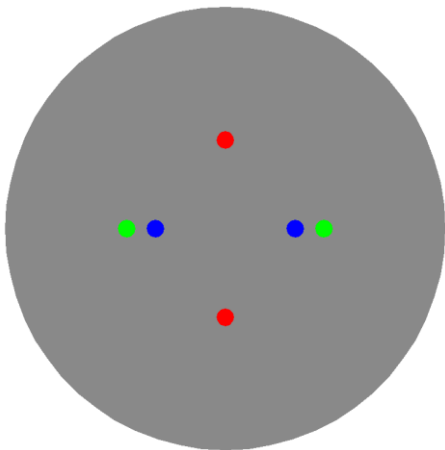
With the LEDiL products:

- Olivia series: FN14637-S; FN14828-M;

LuXEon CX Plus CoB series.

- LUXEON CoB L08: L2C4-xxxx-L08E1400;
- LUXEON CoB L05: L2C4-xxxx-L05E1200;
- LUXEON CoB L04: L2C5-xxxx-L04E1200;

With the Zhaga Book 3 holders for the green indicator marks.
TE Connectivity Holder: 2213401-1;
BJB Holder:47.319.2131.50;
Direct mounting with machine screws M3x6.5mm.





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Mounting Options and Drawings & Dimensions

Example:GooLED-LUM-7850-B-1,2

Example:GooLED-LUM-78 1 - 2 - 3

1 Height (mm)

2 Anodising Color

B-Black

C-Clear

Z-Custom

3 Mounting Options - see graphics for details Combinations available

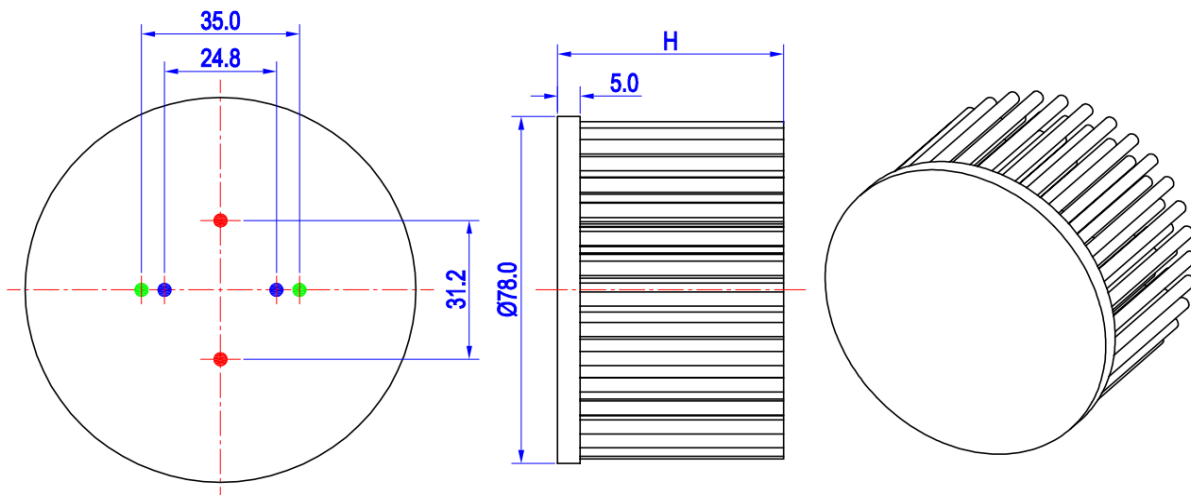
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means option 1 and 2 combined

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
			Stella Series	Olivia series			
1	LUXEON 1204HD; LUXEON 1205HD;	/			M3	6.5mm	24.8mm/ 2-@180°
2		/			M3	6.5mm	31.2mm/ 2-@180°
3	LUXEON 1204; LUXEON 1205; LUXEON 1208;	BJB Holder 47.319.2011.50 TE Holder 2213130-1	/	FN14637-S; FN14828-M;	M3	6.5mm	35.0mm/ 2-@180° (Zhaga Book 3)
	LUXEON 1204HD; LUXEON 1205HD;	TE Holder 2213382-1					
	LUXEON L04; LUXEON L05; LUXEON L08;	BJB Holder 47.319.2131.50 TE Holder 2213401-1					



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The product data table

	Model No.	GooLED-LUM-7850
	Heatsink Size	Φ 78xH50mm
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	197.0
	Dissipated power (T _{hs-amb} ,50°C)	21.5 (W)
	Cooling surface area (mm ²)	75332
	Thermal Resistance (R _{hs-amb})	2.33 (°C/W)

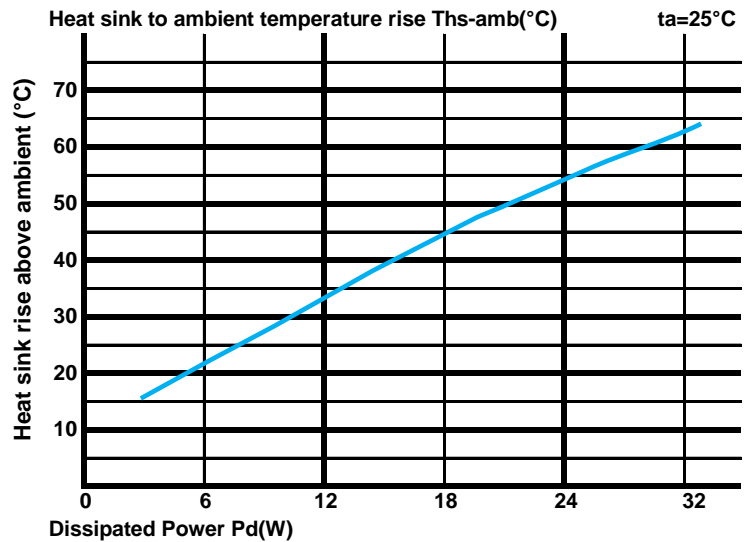
The thermal data table

* 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: Pd = Pe x (1-ηL).

Pd - Dissipated power ; Pe - Electrical power ; ηL = Light efficiency of the LED module;

Dissipated Power Pd(W)	Pd = Pe x (1-ηL)	Heat sink to ambient thermal resistance R _{hs-amb} (°C/W)	Heat sink to ambient temperature rise T _{hs-amb} (°C)
		GooLED-LUM-7850	
6.0		3.50	21.0
12.0		2.67	32.0
18.0		2.44	44.0
24.0		2.25	54.0
32.0		1.97	63.0



*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:

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