

GooLED

GooLED-LG-11050 Pin Fin Heat Sink Φ 110mm for LG Innotek

Features VS Benefits

- * The GooLED-LG-11050 LG Innotek Pin Fin LED Heat Sinks are specifically designed for luminaires using the LG Innotek 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 2,000 to 5,500 lumen.
- * Thermal resistance range R_{th} 1.47°C/W.
- * Modular design with mounting holes foreseen for direct mounting of LG Innotek COB series.
- * Diameter 110.0mm - standard height 50.0mm Other heights on request.
- * Forged from highly conductive aluminum.

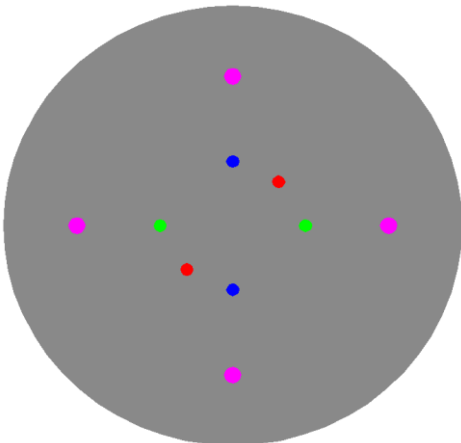
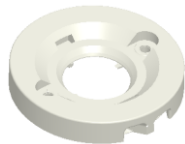


Zhaga LED engine and radiator assembly is a unified future international standardization

- * Below you find an overview of LG Innotek 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.



LG Innotek



LG Innotek LED Modules directly Mounting Options

LG Innotek 42W&56W COB series.

- LEMWM28D80xxxxxx;
- LEMWM28D90xxxxxx;
- LEMWM28E80xxxxxx;
- LEMWM28E90xxxxxx;

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.

LG Innotek 21W&32W COB series.

- LEMWM24980xxxxxx;
- LEMWM24990xxxxxx;
- LEMWM24B80xxxxxx;
- LEMWM24B90xxxxxx;

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;
 - Stella Series: FN13xxx-xx; FN14xxx-xx; FN15xxx-xx;
 - Stella Series mounting hole for the pink indicator marks.
- Direct mounting with machine screws M4x8.5mm.



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Mounting Options and Drawings & Dimensions

Example:GooLED-LG-11050-B-1,2

Example:GooLED-LG-110 **1** - **2** - **3**

1 Height (mm)

2 Anodising Color

B-Black

C-Clear

Z-Custom

3 Mounting Options - see graphics for details Combinations available

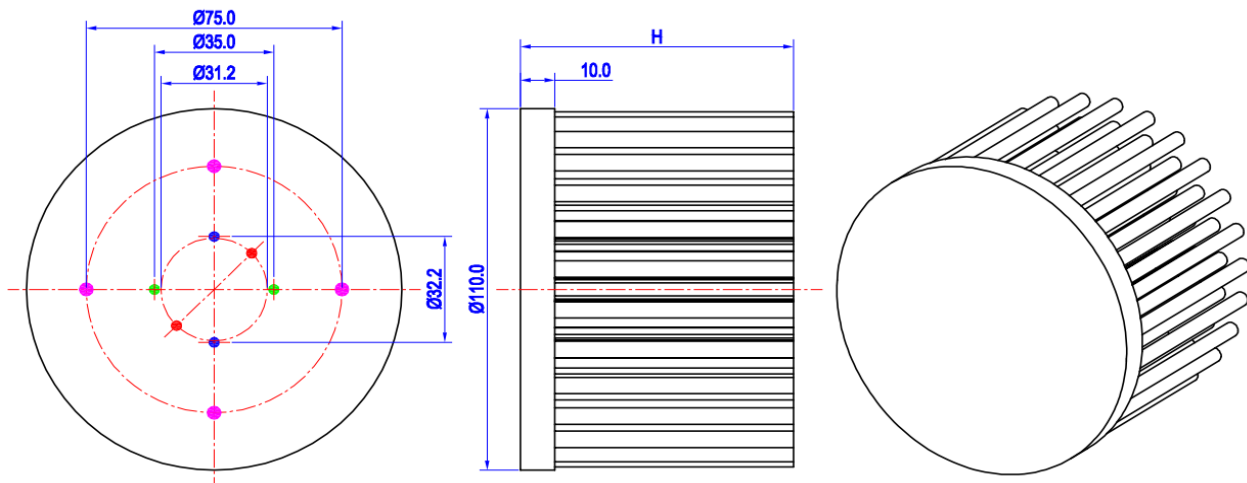
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means option 1 and 2 combined

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	21W&32W COB	/	FN13xxx-xx; FN14xxx-xx; FN15xxx-xx;	FN14637-S; FN14828-M;	M3	6.5mm	31.2mm/ 2-@180°			
2	42W&56W COB	/			M3	6.5mm	32.2mm/ 2-@180°			
3	21W&32W COB	BJB Holder 47.319.2011.50 TE Holder 2213130-1			M3	6.5mm	35.0mm/ 2-@180° (Zhaga Book 3)			
	42W&56W COB	BJB Holder 47.319.2030.50 TE Holder 2213480-1								
4	LEDiL Lens	/	Stella Series	/				M4	8.5mm	75.0mm/ 4-@90°



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The product data table

	Model No.	GooLED-LG-11050
	Heatsink Size	$\Phi 110 \times H50\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	463.0
	Dissipated power (T _{hs-amb} ,50°C)	34.0 (W)
	Cooling surface area (mm ²)	83372
	Thermal Resistance (R _{hs-amb})	1.47 (°C/W)

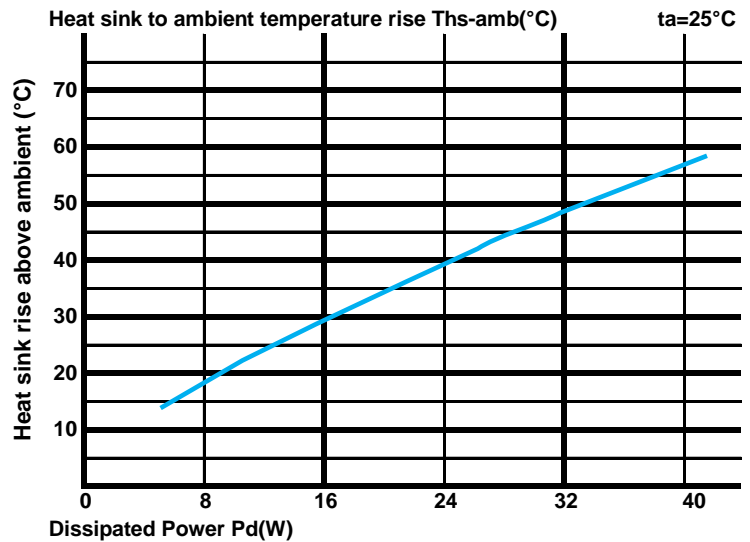
The thermal data table

* 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)	Pd = Pe x (1- η_L)	Heat sink to ambient thermal resistance R _{hs-amb} (°C/W)	Heat sink to ambient temperature rise T _{hs-amb} (°C)
		GooLED-LG-11050	
8.0		2.25	18.0
16.0		1.81	29.0
24.0		1.63	39.0
32.0		1.50	48.0
40.0		1.40	56.0



*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:

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