



for

LED



GooLED

GooLED-LG-8665 Pin Fin Heat Sink  $\Phi$ 86.5mm for LG Innotech

Features VS Benefits

- \* The GooLED-LG-8665 LG Innotech Pin Fin LED Heat Sinks are specifically designed for luminaires using the LG Innotech 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 1,800 to 5,200 lumen.
- \* Thermal resistance range  $R_{th}$  1.56°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of LG Innotech COB series.
- \* Diameter 86.5mm - standard height 65.0mm Other heights on request.
- \* Forged from highly conductive aluminum.

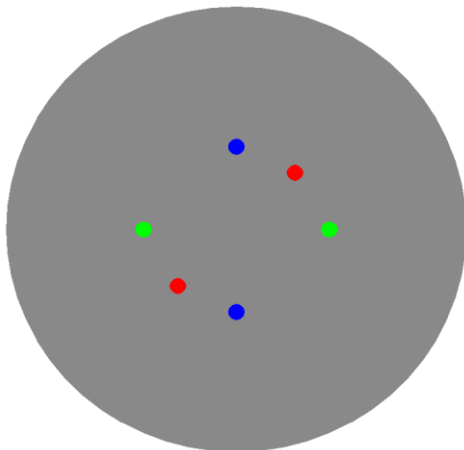
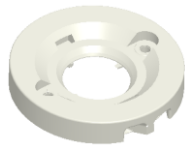


Zhaga LED engine and radiator assembly is a unified future international standardization

- \* Below you find an overview of LG Innotech 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 Innotech



LG Innotech LED Modules directly Mounting Options

LG Innotech 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 Innotech 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;



*GooLED*

**GooLED-LG-8665 Pin Fin Heat Sink  $\Phi$ 86.5mm for LG Innotek**

### Mounting Options and Drawings & Dimensions

Example:GooLED-LG-8665-B-1,2

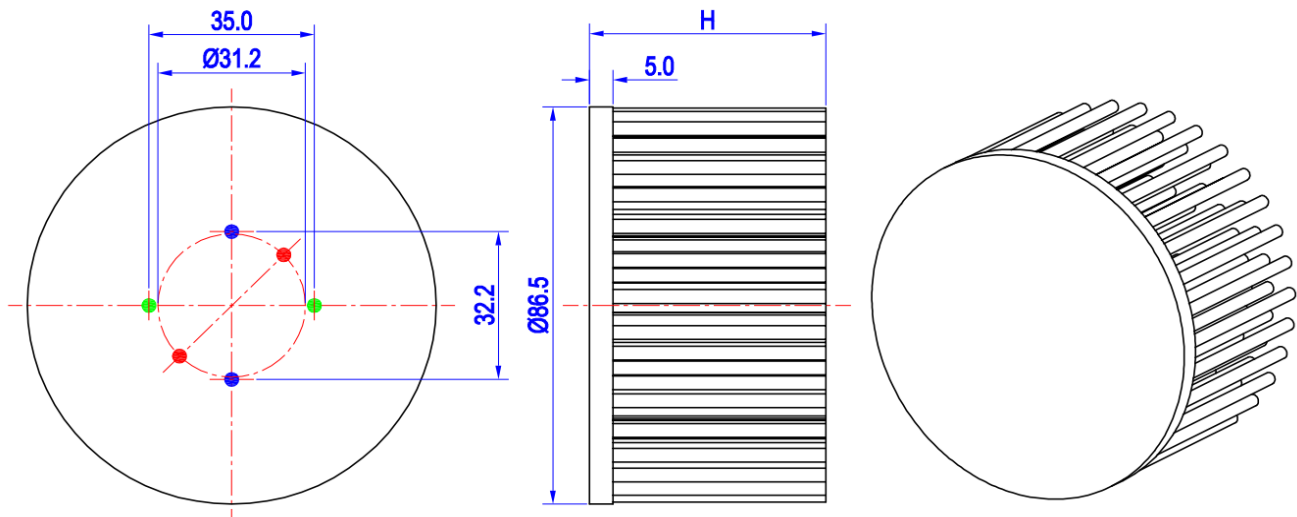
Example:GooLED-LG-86 **1** - **2** - **3**

- 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	21W&32W COB	/			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	/	FN14637-S; FN14828-M;	M3	6.5mm	35.0mm/ 2-@180° (Zhaga Book 3)
		TE Holder 2213130-1					
	42W&56W COB	BJB Holder 47.319.2030.50					
		TE Holder 2213480-1					



## GooLED

### GooLED-LG-8665 Pin Fin Heat Sink $\Phi 86.5\text{mm}$ for LG Innotek

#### The product data table

	<b>Model No.</b>	GooLED-LG-8665
	<b>Heatsink Size</b>	$\Phi 86.5 \times H65\text{mm}$
	<b>Heatsink Material</b>	AL1070
	<b>Finish</b>	Black Anodized
	<b>Weight (g)</b>	293.0
	<b>Dissipated power (T<sub>hs-amb</sub>,50°C)</b>	32.0 (W)
	<b>Cooling surface area (mm<sup>2</sup>)</b>	95583
	<b>Thermal Resistance (R<sub>hs-amb</sub>)</b>	1.56 (°C/W)

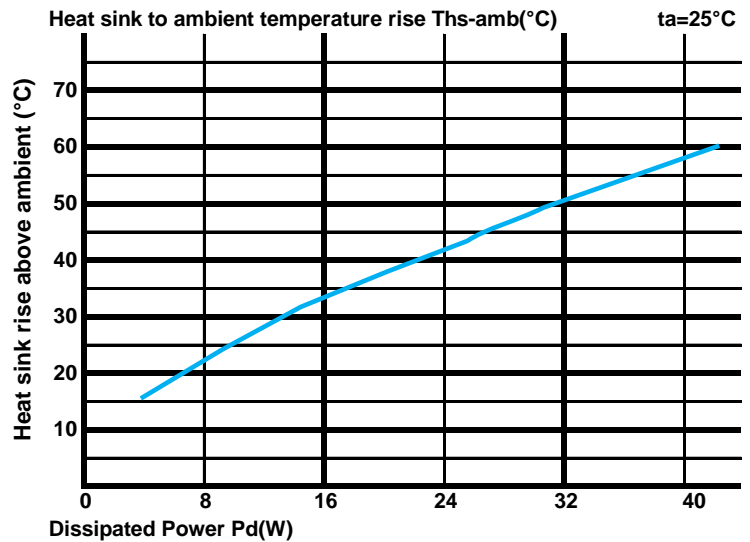
#### The thermal data table

\* 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 ;  $\eta_L$  = Light efficiency of the LED module;

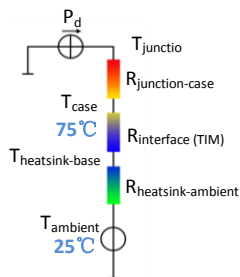
Dissipated Power Pd(W)	Pd = Pe x (1- $\eta_L$ )	Heat sink to ambient thermal resistance R <sub>hs-amb</sub> (°C/W)	Heat sink to ambient temperature rise T <sub>hs-amb</sub> (°C)
		GooLED-LG-8665	
8.0		2.75	22.0
16.0		2.13	34.0
24.0		1.75	42.0
32.0		1.56	50.0
40.0		1.45	58.0



\*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:  $\theta = (T_{hs} - T_a) / P_d$

$\theta$  - Thermal Resistance [°C/W] ; T<sub>hs</sub> - Heatsink temperature ; T<sub>a</sub> - 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<sub>junction-case</sub>, the thermal resistance of the TIM outside the package is R<sub>interface (TIM)</sub> [°C/W], the thermal resistance with the heat sink is R<sub>heatsink-ambient</sub> [°C/W], and the ambient temperature is T<sub>ambient</sub> [°C].

\*Thermal resistances outside the package R<sub>interface (TIM)</sub> and R<sub>heatsink-ambient</sub> can be integrated into the thermal resistance R<sub>case-ambient</sub> at this point. Thus, the following formula is also used:

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