



for

LED



xLED

### xLED-LG-8030 Pin Fin Heat Sink $\Phi$ 80mm for LG Innotek

#### Features VS Benefits

- \* The xLED-LG-8030 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 1,000 to 2,600 lumen.
- \* Thermal resistance range Rth 3.13°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of LG Innotek COB series.
- \* Diameter 80.0mm - standard height 30.0mm 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 LED Modules directly Mounting Options

##### LG Innotek 7W&10W COB series.

- LEMWM19480xxxxxx;
- LEMWM19490xxxxxx;
- LEMWM19680xxxxxx;
- LEMWM19690xxxxxx;

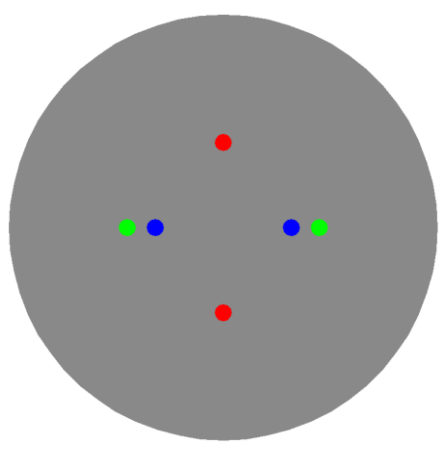
With the Zhaga Book 3 holders for the green indicator marks.  
 TE Connectivity Holder: 2213382-1;  
 Without the holders for the blue indicator marks.  
 Direct mounting with machine screws M3x6.5mm.

##### LG Innotek 16W&21W COB series.

- LEMWM24780xxxxxx;
- LEMWM24790xxxxxx;
- LEMWM24980xxxxxx;
- LEMWM24990xxxxxx;

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;



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**xLED-LG-8030 Pin Fin Heat Sink  $\Phi$ 80mm for LG Innotek**

## Mounting Options and Drawings & Dimensions

Example: xLED-LG-8030-B-1,2

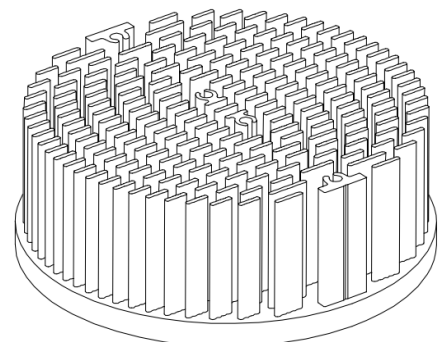
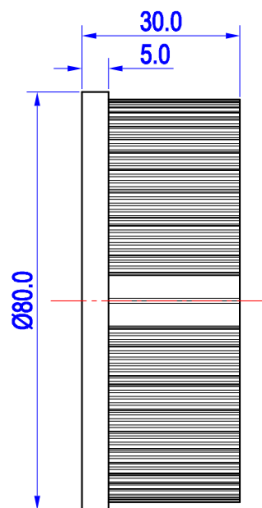
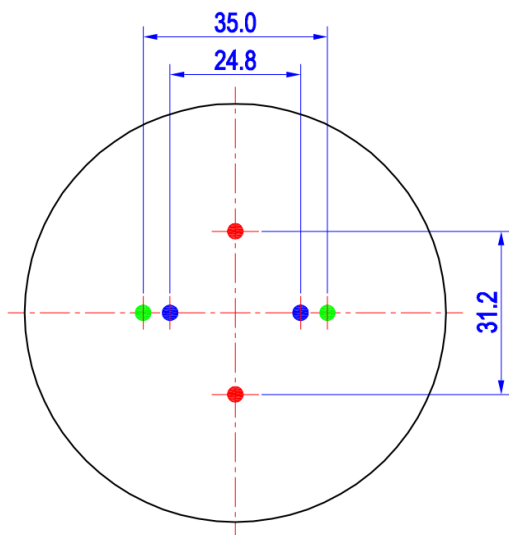
Example: xLED-LG-80 **1** - **2** - **3**

- 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.	LEDiL products		THREAD	THREAD DEPTH	THREAD HOLE DISTANCE
			Stella Series	Olivia series			
1	7W&10W COB	/	/	FN14637-S; FN14828-M;	M3	6.5mm	24.8mm/ 2-@180°
2	/	/			M3	6.5mm	31.2mm/ 2-@180°
3	16W&21W COB	BJB Holder 47.319.2011.50			/	FN14637-S; FN14828-M;	M3
	7W&10W COB	TE Holder 2213130-1					
		TE Holder 2213382-1					



The product data table

	Model No.	xLED-LG-8030
	Heatsink Size	$\Phi 80 \times H 30\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	140.0
	Dissipated power ( $T_{hs-amb,50^\circ\text{C}}$ )	16.0 (W)
	Cooling surface area ( $\text{mm}^2$ )	72123
	Thermal Resistance ( $R_{hs-amb}$ )	3.13 ( $^\circ\text{C}/\text{W}$ )

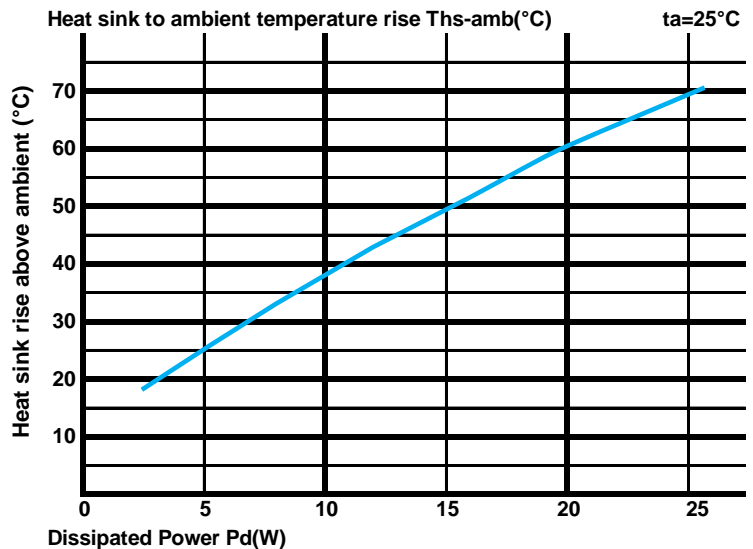
The thermal data table

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

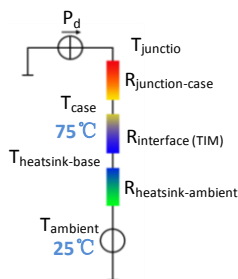
Dissipated Power $P_d(\text{W})$	$P_d = P_e \times (1 - \eta_L)$	Heat sink to ambient thermal resistance $R_{hs-amb}$ ( $^\circ\text{C}/\text{W}$ )	Heat sink to ambient temperature rise $T_{hs-amb}$ ( $^\circ\text{C}$ )
		xLED-LG-8030	
5.0	5.0	5.00	25.0
10.0	10.0	3.80	38.0
15.0	15.0	3.27	49.0
20.0	20.0	3.00	60.0
25.0	25.0	2.76	69.0



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

\* 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:

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