



xLED

xLED-LG-7050 Pin Fin Heat Sink Φ 70mm for LG Innotek

Features VS Benefits

- * The xLED-LG-7050 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 70.0mm - 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 LED Modules directly Mounting Options

LG Innotek 7W&10W COB series.

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

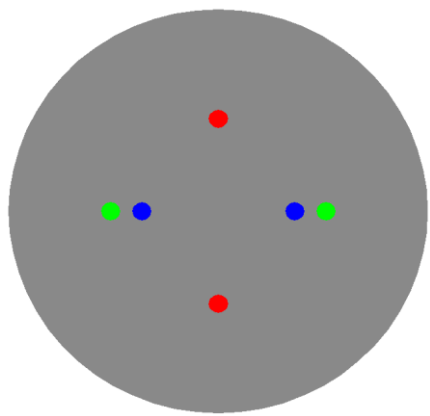
With the Zhaga Book 3 holders for the green indicator marks.
 TE Connectivity Holder: 2213382-1;
 Without the holders for the blue indicator marks.
 Direct mounting with machine screws M3x6.5mm.

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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Mounting Options and Drawings & Dimensions

Example: xLED-LG-7050-B-1,2

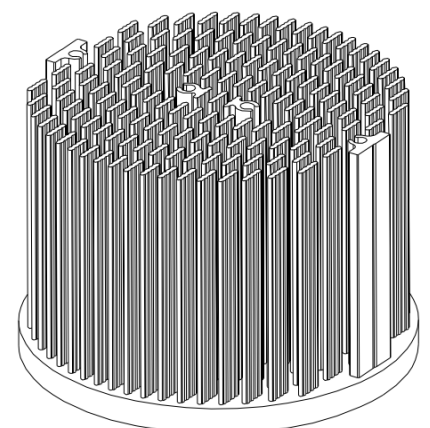
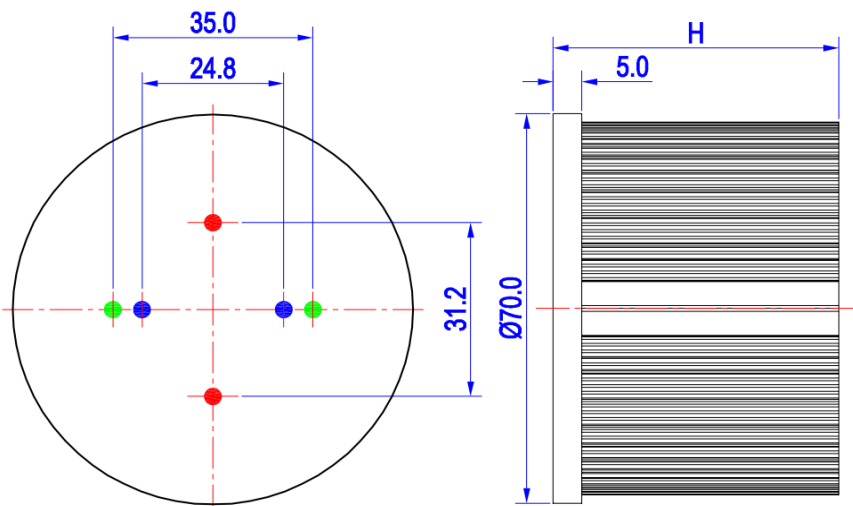
Example: xLED-LG-70 **1** - **2** - **3**

- 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			M3	6.5mm	35.0mm/ 2-@180° (Zhaga Book 3)
	7W&10W COB	TE Holder 2213130-1					
		TE Holder 2213382-1					



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xLED-LG-7050 Pin Fin Heat Sink $\Phi 70$ mm for LG Innotek

The product data table

	Model No.	xLED-LG-7050
	Heatsink Size	$\Phi 70 \times H 50$ mm
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	150.0
	Dissipated power (Ths-amb,50°C)	16.0 (W)
	Cooling surface area (mm²)	91577
	Thermal Resistance (Rhs-amb)	3.13 (°C/W)

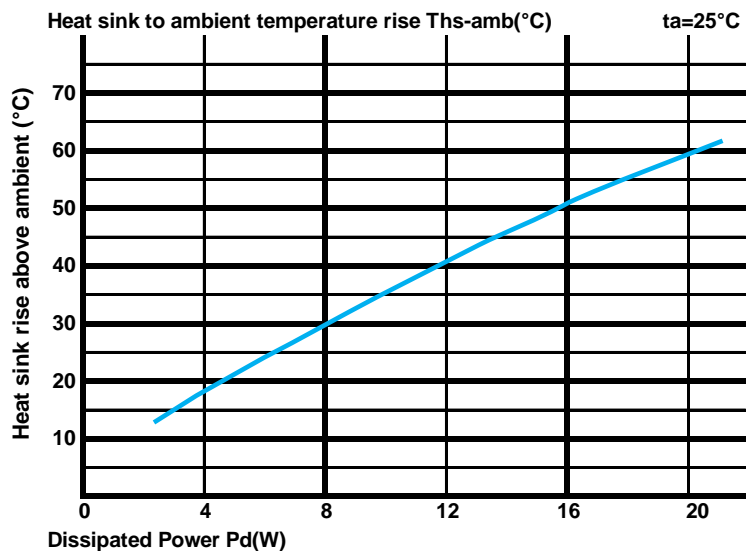
The thermal data table

* 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;

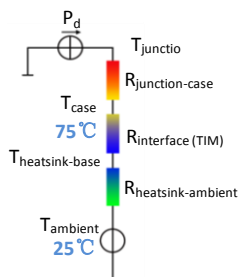
Dissipated Power Pd(W)	Heat sink to ambient thermal resistance Rhs-amb (°C/W)		Heat sink to ambient temperature rise Ths-amb (°C)	
	xLED-LG-7050			
4.0	4.25	17.0		
8.0	3.63	29.0		
12.0	3.33	40.0		
16.0	3.13	50.0		
20.0	2.95	59.0		



*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 [°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:

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