



LED

xLED

xLED-LG-4568 Pin Fin Heat Sink Φ 45mm for LG Innotek

Features VS Benefits

- * The xLED-LG-4568 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 300 to 1,400 lumen.
- * Thermal resistance range Rth 4.76°C/W.
- * Modular design with mounting holes foreseen for direct mounting of LG Innotek COB series.
- * Diameter 45.0mm - standard height 68.0mm 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;

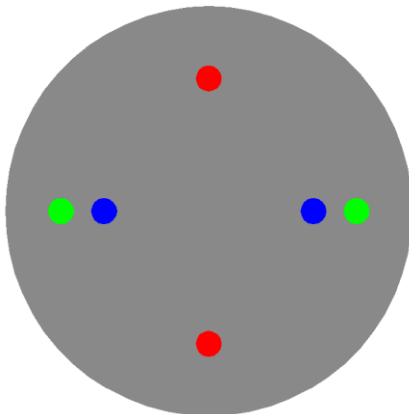
With the Zhaga Book 3 holders for the green indicator marks.
TE Connectivity Holder: 2213382-1;
Without the holders for the blue indicator marks.
Direct mounting with machine screws M3x6.5mm.

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-4568-B-1,2

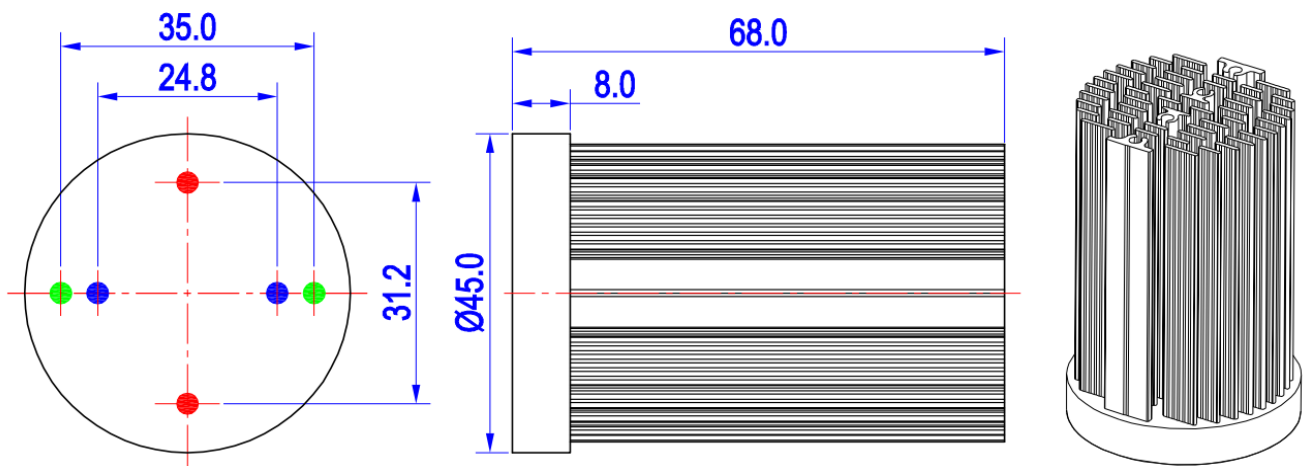
Example: xLED-LG-45 **1** - **2** - **3**

- 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 2213382-1 | | | | | |



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xLED-LG-4568 Pin Fin Heat Sink $\Phi 45\text{mm}$ for LG Innotek

The product data table

| | | |
|--|---|--------------------------------|
| | Model No. | xLED-LG-4568 |
| | Heatsink Size | $\Phi 45 \times H 68\text{mm}$ |
| | Heatsink Material | AL1070 |
| | Finish | Black Anodized |
| | Weight (g) | 90.0 |
| | Dissipated power (Ths-amb,50°C) | 10.5 (W) |
| | Cooling surface area (mm ²) | 49775 |
| | Thermal Resistance (Rhs-amb) | 4.76 (°C/W) |

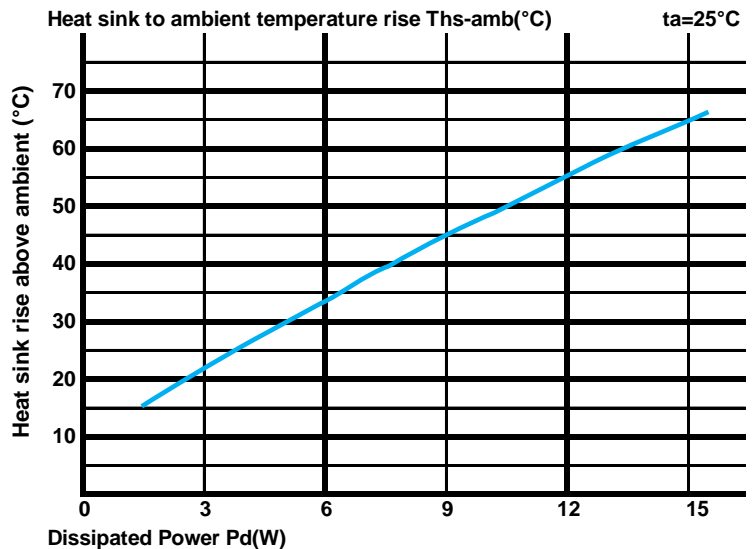
The thermal data table

* 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;

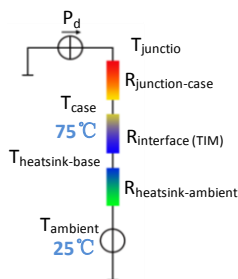
| Dissipated Power Pd(W) | Heat sink to ambient thermal resistance Rhs-amb (°C/W) | | Heat sink to ambient temperature rise Ths-amb (°C) | |
|------------------------|--|------|--|--|
| | xLED-LG-4568 | | | |
| 3.0 | 7.00 | 21.0 | | |
| 6.0 | 5.50 | 33.0 | | |
| 9.0 | 5.00 | 45.0 | | |
| 12.0 | 4.58 | 55.0 | | |
| 15.0 | 4.27 | 64.0 | | |



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

*Thermal resistances outside the package $R_{\text{interface (TIM)}}$ and $R_{\text{thsink-ambient}}$ can be integrated into the thermal resistance $R_{\text{case-ambient}}$ at this point. Thus, the following formula is also used:

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