



for

LED



xLED

xLED-LUME-7030 Pin Fin Heat Sink Φ 70mm for Lumens

Features VS Benefits

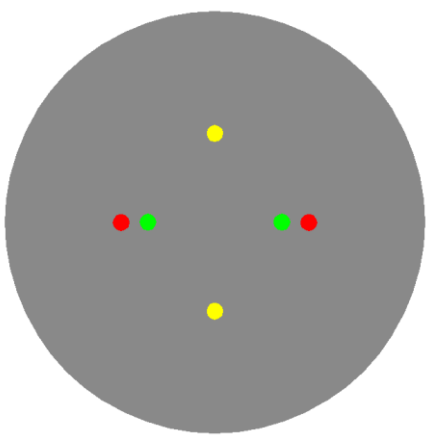
- * The xLED-LUME-7030 Lumens Pin Fin LED Heat Sinks are specifically designed for luminaires using the Lumens LED engines.
- * Mechanical compatibility with direct mounting of the LED engines to the LED cooler and thermal performance matching the lumen packages.
- * For spotlight and downlight designs from 900 to 2,200 lumen.
- * Thermal resistance range Rth 3.85°C/W.
- * Modular design with mounting holes foreseen for direct mounting of Lumens Ergon COB series, and AC-ALL series LED engines.
- * Diameter 70.0mm - 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 Lumens 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.

LUMENS



Lumens LED Modules directly Mounting Options

Lumens Ergon COB_HO, COB_HO+, COB_HE Series :
 ERC1812xxxxHO; ERC1812xxxxHE;
 ERC1820xxxxHO; ERC1820xxxxHE;
 With the Zhaga Book 3 holders for the red indicator marks.
 (Ideal Holder:50-2101CR); (BJB holder:47.319.2131.50);
 Without the holders for the green indicator marks.
 Direct mounting with machine screws M3x6.5mm.

Lumens Ergon COB_HO, COB_HO+, COB_HE Series :
 ERC2520xxxxHO; ERC2530xxxxHE;
 ERC2530xxxxHO; ERC2540xxxxHE;
 ERC2540xxxxHO; ERC2530xxxxHO+
 ERC2520xxxxHO+
 With the Zhaga Book 3 holders for the red indicator marks.
 (Ideal Holder:50-2102CR); (BJB Holder:47.319.2141.50);
 Without the holders for the yellow indicator marks.
 Direct mounting with machine screws M3x6.5mm.

Lumens AC-ALL Series :
 EDC/47C/15W/xxx/120V/B; EDC/47C/15W/xxx/230V/A;
 EDC/57C/20W/xxx/120V/B; EDC/57C/20W/xxx/230V/A;
 EDC/57C/30W/xxx/120V/B; EDC/57C/30W/xxx/230V/A;
 With the Zhaga Book 3 holders for the red indicator marks.
 Direct mounting with machine screws M3x6.5mm.
 Please refer to the www.lumensleds.com data provided on the manual.



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Mounting Options and Drawings & Dimensions

Example:xLED-LUME-7030-B-1,2

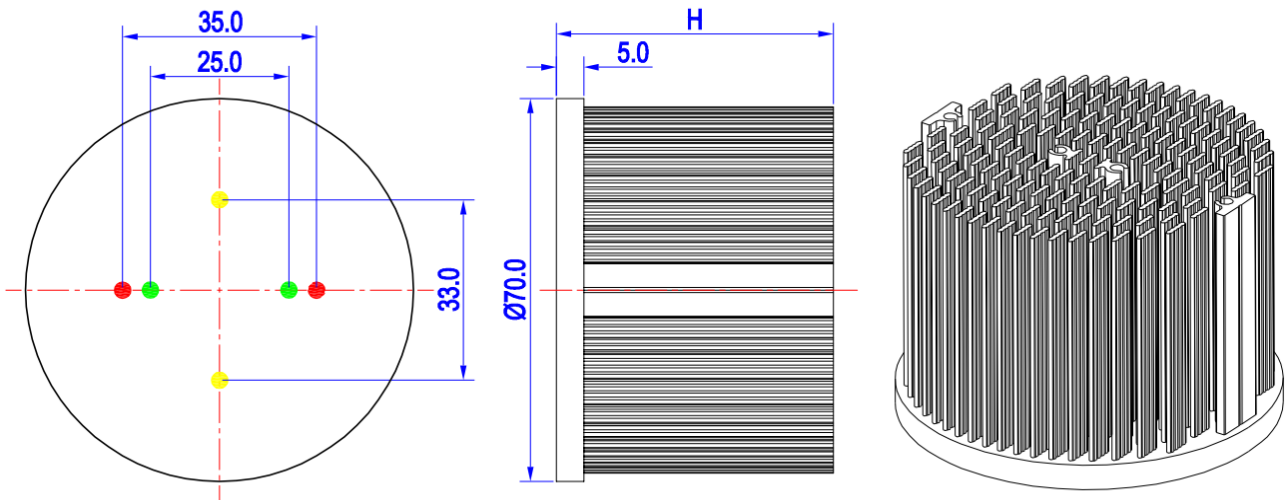
Example:xLED-LUME-70 **1** - **2** - **3**

- 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. | THREAD | THREAD DEPTH | THREAD HOLE DISTANCE |
|---------------------------|-------------------------|------------------------------|--------|--------------|--|
| 1 | Ergon COB (17.85x17.85) | / | M3 | 6.5mm | 25.0mm/ 2- Φ 180° |
| 2 | Ergon COB (23.85x23.85) | / | M3 | 6.5mm | 33.0mm/ 2- Φ 180° |
| 3 | AC-ALL Series | Lumens | M3 | 6.5mm | 35.0mm/ 2- Φ 180° (Zhaga book 3) |
| | Ergon COB (17.85x17.85) | BJB Holder 47.319.2131.50 | | | |
| | | Ideal Holder 50-2101CR | | | |
| | Ergon COB (23.85x23.85) | BJB Holder 47.319.2141.50 | | | |
| Ideal Holder 50-2102CR | | | | | |



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xLED-LUME-7030 Pin Fin Heat Sink $\Phi 70$ mm for Lumens

The product data table

| | | |
|--|--|--------------------------|
| | Model No. | xLED-LUME-7030 |
| | Heatsink Size | $\Phi 70 \times H 30$ mm |
| | Heatsink Material | AL1070 |
| | Finish | Black Anodized |
| | Weight (g) | 106.0 |
| | Dissipated power (Ths-amb,50°C) | 13.0 (W) |
| | Cooling surface area (mm²) | 54786 |
| | Thermal Resistance (Rhs-amb) | 3.85 (°C/W) |

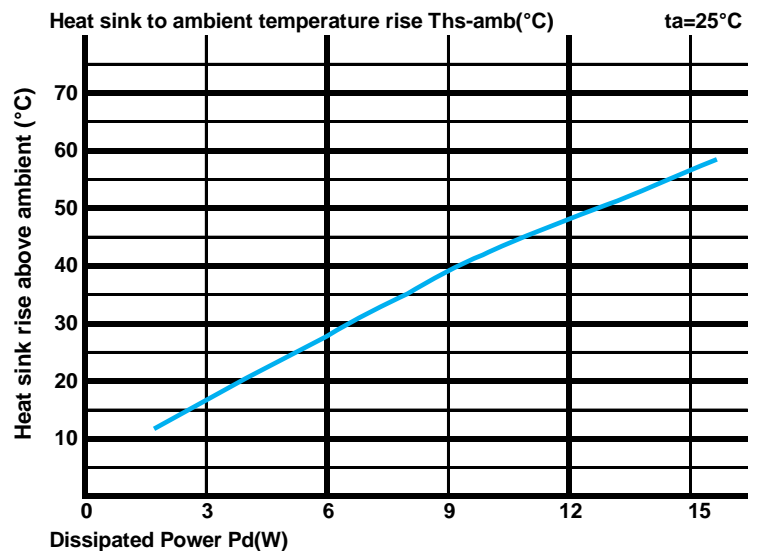
The thermal data table

* 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;

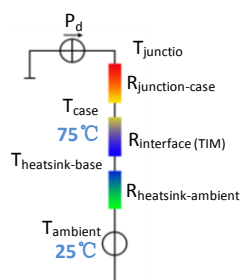
| Dissipated Power Pd(W) | Pd = Pe x (1- η_L) | Heat sink to ambient thermal resistance Rhs-amb (°C/W) | Heat sink to ambient temperature rise Ths-amb (°C) |
|------------------------|--------------------------|--|--|
| | | xLED-LUME-7030 | |
| 3.0 | | 5.33 | 16.0 |
| 6.0 | | 4.50 | 27.0 |
| 9.0 | | 4.33 | 39.0 |
| 12.0 | | 3.92 | 47.0 |
| 15.0 | | 3.73 | 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:

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