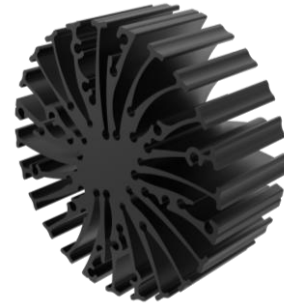


EtraLED

EtraLED-CRE-7050 CREE Modular Passive Star Heat Sink Φ 70mm

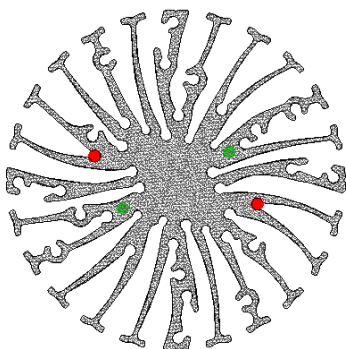
Features VS Benefits

- * The EtraLED-CRE-7050 Cree Modular Passive Star LED Heat Sinks are specifically designed for luminaires using the Cree 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 1200 to 3,000 lumen.
- * Thermal resistance range R_{th} 2.50°C/W.
- * Modular design with mounting holes foreseen for direct mounting of Cree® XLamp® COB series.
- * Diameter 70mm - standard height 50mm, 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 Cree COB's and LED modules which standard fit on the srar 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 srar LED heat sinks.



Cree LED Modules directly Mounting Options

Cree® XLamp® COB Series:

- Xlamp CXA 13xx;
- Xlamp CXB 13xx;

With the Zhaga Book 11 holders for the green indicator marks.
 IDEAL Holder:50-2100CR;
 BJB Holder:47.319.6020.50;
 Direct mounting with machine screws M3x6.5mm.

With the LEDiL products:
 Olivia series: FN14637-S; FN14828-M;
 Ronda series: FN15xxx-xx;

Cree® XLamp® COB Series:

- Xlamp CXA 18xx;
- Xlamp CXB 18xx;

With the Zhaga Book 3 holders for the green indicator marks.
 IDEAL Holder:50-2101CR;
 BJB Holder:47.319.2131.50;
 Direct mounting with machine screws M3x6.5mm.

With the LEDiL products:
 Olivia series: FN14637-S; FN14828-M;
 Ronda series: FN15xxx-xx;

Cree® XLamp® COB Series:

- Xlamp CXA 15xx;
- Xlamp CXB 15xx;

With the Zhaga Book 11 holders for the red indicator marks.
 IDEAL Holder:50-2001CR;
 BJB Holder:47.319.6104.50;
 AAG.STUCCHI holder:8400-G2;
 Direct mounting with machine screws M3x6.5mm.

With the LEDiL products:
 Ronda series: FN15xxx-xx;

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EtraLED-CRE-7050 CREE Modular Passive Star Heat Sink Φ 70mm

Mounting Options and Drawings & Dimensions

Example: EtraLED-CRE-7050-B-1,2

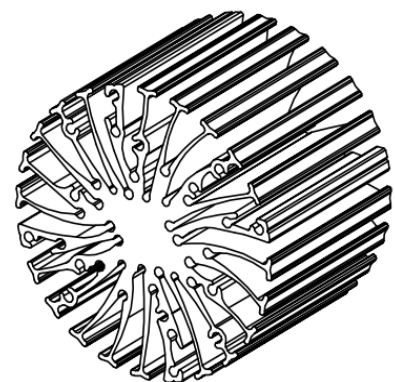
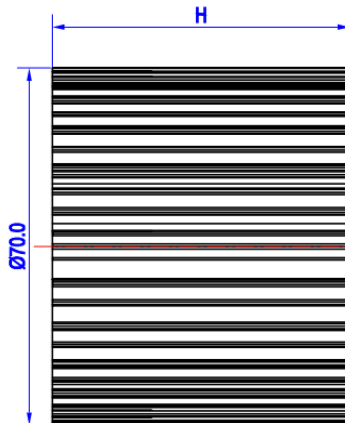
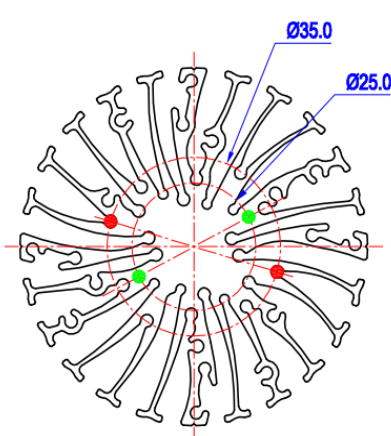
Example: EtraLED-CRE-70 **1** - **2** - **3**

- 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 |
|-----------------|------------------------------------|------------------------------|--------------------------|--------------|--------|--------------|------------------------------------|
| | | | Olivia series | Ronda series | | | |
| 1 | Xlamp CXA 13xx; Xlamp CXB 13xx; | BJB Holder 47.319.6104.50 | FN14637-S; | | M3 | 6.5mm | 25.0mm/ 2-@180° (Zhaga Book 11) |
| | | IDEAL Holder 50-2001CR | | | | | |
| | Xlamp CXA 15xx; Xlamp CXB 15xx; | BJB Holder 47.319.6104.50 | / | | | | |
| | | AAG.STUCCHI 8400-G2 | | | | | |
| 2 | Xlamp CXA 18xx; Xlamp CXB 18xx; | BJB Holder 47.319.2131.50 | FN14637-S; FN14828-M; | | M3 | 6.5mm | 35.0mm/ 2-@180° (Zhaga Book 3) |
| | | IDEAL Holder 50-2101CR | | | | | |



EtraLED

EtraLED-CRE-7050 CREE Modular Passive Star Heat Sink Φ70mm

The product data table

| | | |
|--|---|------------------|
| | Model No. | EtraLED-CRE-7050 |
| | Heatsink Size | Φ70xH50mm |
| | Heatsink Material | AL6063-T5 |
| | Finish | Black Anodized |
| | Weight (g) | 192.0 |
| | Dissipated power (T_{hs-amb},50°C) | 20.0 (W) |
| | Cooling surface area (mm²) | 79093 |
| | Thermal Resistance (R_{hs-amb}) | 2.5 (°C/W) |

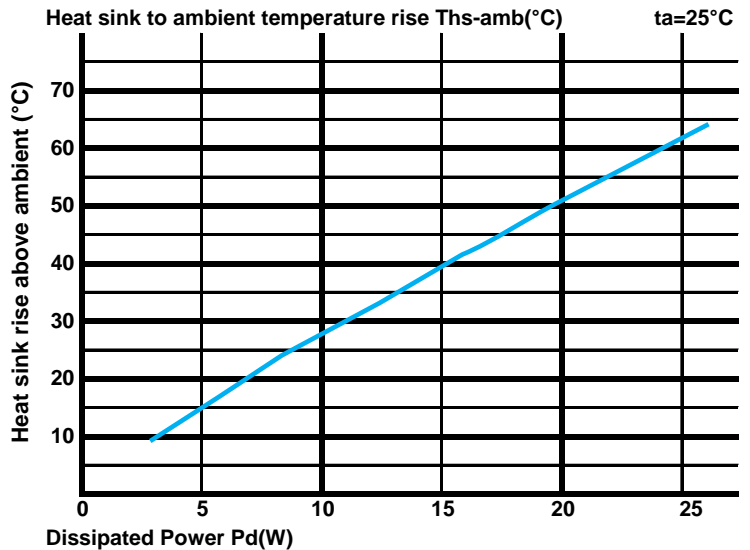
The thermal data table

* 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: Pd = Pe x (1-ηL).

Pd - Dissipated power ; Pe - Electrical power ; ηL = Light efficiency of the LED module;

| Dissipated Power Pd(W) | Pd = Pe x (1-ηL) | Heat sink to ambient thermal resistance R _{hs-amb} (°C/W) | Heat sink to ambient temperature rise Ths-amb (°C) |
|------------------------|------------------|--|--|
| | | EtraLED-CRE-7050 | |
| 5.0 | | 3.00 | 15.0 |
| 10.0 | | 2.70 | 27.0 |
| 15.0 | | 2.60 | 39.0 |
| 20.0 | | 2.50 | 50.0 |
| 25.0 | | 2.44 | 61.0 |



*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:

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