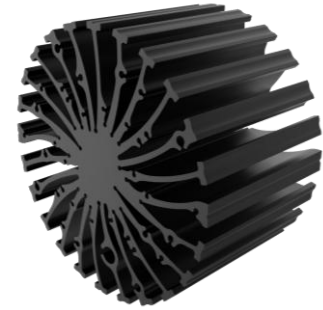


## EtraLED

### EtraLED-LG-13080 LG Innotek Modular Passive Star Heat Sink $\Phi$ 130mm

#### Features VS Benefits

- \* The EtraLED-LG-13080 LG Innotek Modular Passive Star 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 3600 to 9,000 lumen.
- \* Thermal resistance range  $R_{th}$  0.83°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of LG Innotek COB series.
- \* Diameter 130.0mm - standard height 80.0mm 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 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.



#### LG Innotek LED Modules directly Mounting Options

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

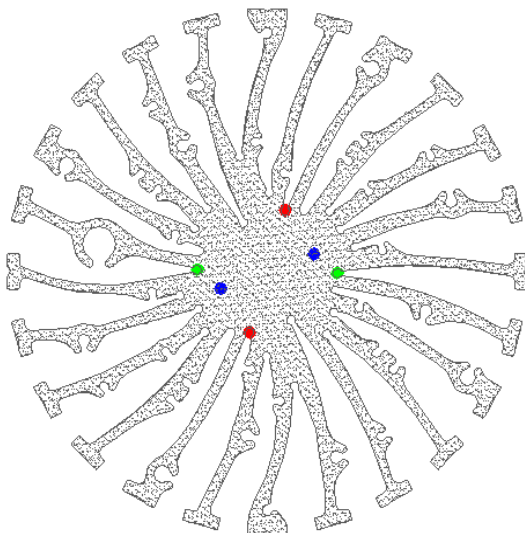
LEMWM19480xxxxxx;  
LEMWM19490xxxxxx;  
LEMWM19680xxxxxx;  
LEMWM19690xxxxxx;

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.



**EtraLED**

**EtraLED-LG-13080 LG Innotek Modular Passive Star Heat Sink  $\Phi$ 130mm**

**Mounting Options and Drawings & Dimensions**

Example: EtraLED-LG-13080-B-1,2

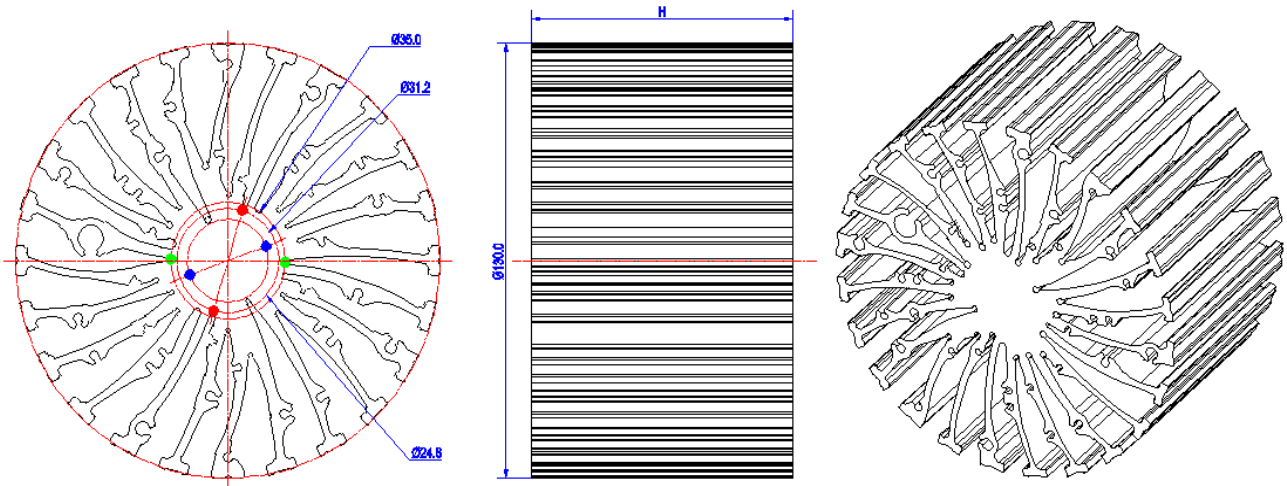
Example: EtraLED-LG-130 **1** - **2** - **3**

- 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               | 7W&10W COB  | /                            | M3     | 6.5mm        | 24.8mm/ 2-@180°                   |
| 2               |             | /                            | M3     | 6.5mm        | 31.2mm/ 2-@180°                   |
| 3               | 16W&21W COB | BJB Holder<br>47.319.2011.50 | M3     | 6.5mm        | 35.0mm/ 2-@180°<br>(Zhaga Book 3) |
|                 |             | TE Holder<br>2213130-1       |        |              |                                   |
|                 | 7W&10W COB  | TE Holder<br>2213382-1       |        |              |                                   |



## EtraLED

### EtraLED-LG-13080 LG Innotek Modular Passive Star Heat Sink $\Phi 130\text{mm}$

#### The product data table

|  |  |                                 |
|--|--|---------------------------------|
|  | <b>Model No.</b>                                   | EtraLED-LG-13080                |
|  | <b>Heatsink Size</b>                               | $\Phi 130 \times H 80\text{mm}$ |
|  | <b>Heatsink Material</b>                           | AL6063-T5                       |
|  | <b>Finish</b>                                      | Black Anodized                  |
|  | <b>Weight (g)</b>                                  | 1108.0                          |
|  | <b>Dissipated power (T<sub>hs-amb</sub>, 50°C)</b> | 60.0 (W)                        |
|  | <b>Cooling surface area (mm<sup>2</sup>)</b>       | 245462                          |
|  | <b>Thermal Resistance (R<sub>hs-amb</sub>)</b>     | 0.83 (°C/W)                     |

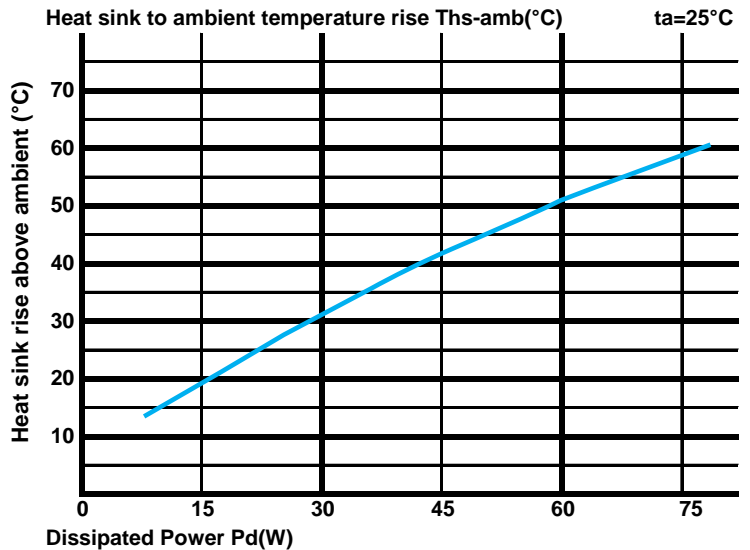
#### The thermal data table

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

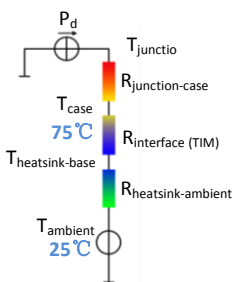
| Dissipated Power Pd(W) | Pd = Pe x (1- $\eta_L$ ) | Heat sink to ambient thermal resistance R <sub>hs-amb</sub> (°C/W) | Heat sink to ambient temperature rise Ths-amb (°C) |
|------------------------|--------------------------|--|--|
|                        |                          | EtraLED-LG-13080   |  |
| 15.0                   |                          | 1.20   | 18.0   |
| 30.0                   |                          | 1.00   | 30.0   |
| 45.0                   |                          | 0.93   | 42.0   |
| 60.0                   |                          | 0.83   | 50.0   |
| 75.0                   |                          | 0.77   | 58.0   |



\*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 [°C/W]; Ths - Heatsink temperature ; Ta - 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  $R_{\text{heatsink-ambient}}$  [°C/W], and the ambient temperature is  $T_{\text{ambient}}$  [°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:

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