



for

LED



GooLED

GooLED-CIT-11080 Pin Fin Heat Sink Φ 110mm for Citizen

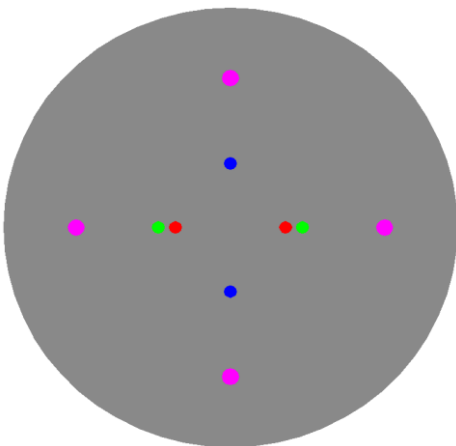
Features VS Benefits

- * The GooLED-CIT-11080 Citizen Pin Fin LED Heat Sinks are specifically designed for luminaires using the Citizen 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 2,500 to 7,000 lumen.
- * Thermal resistance range R_{th} 1.14°C/W.
- * Modular design with mounting holes foreseen for direct mounting of citizen COB series.
- * Diameter 110mm - standard height 80mm 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 Citizen 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.



Citizen LED Modules directly Mounting Options

Citizen COB version 4, version 5, version 6 Series:

- CLU046-12xxxx; CLU048-12xxxx;
- CLU046-18xxxx; CLU048-18xxxx;

Citizen High intensity COB Series:

- CLU731-12xxxx;

With the Zhaga Book 3 holders for the green indicator marks.

BJB holder: 47.319.2030.50; AAG.STUCCHI: 8102-G2

Without the holders for the blue indicator marks.

Direct mounting with machine screws M3x6.5mm.

With the LEDiL products:

Stella Series: FN13xxx-xx; FN14xxx-xx; FN15xxx-xx;

Stella Series mounting hole for the pink indicator marks

Citizen LED Modules directly Mounting Options

Citizen COB version 4, version 5, version 6 Series:

- CLU036-12xxxx;
- CLU038-12xxxx;

Citizen High intensity COB Series:

- CLU721-12xxxx;
- CLU711-12xxxx;

With the Zhaga Book 3 holders for the green indicator marks.

BJB holder: 47.319.2021.50; AAG.STUCCHI: 8101-G2

Without the holders for the red indicator marks.

Direct mounting with machine screws M3x6.5mm.

With the LEDiL products:

Stella Series: FN13xxx-xx; FN14xxx-xx; FN15xxx-xx;

Stella Series mounting hole for the pink indicator marks

Olivia series: FN14637-S

Ronda series: FN15xxx-xx;

GooLED

GooLED-CIT-11080 Pin Fin Heat Sink Φ 110mm for Citizen

Mounting Options and Drawings & Dimensions

Example:GooLED-CIT-11080-B-1,2

Example:GooLED-CIT-110 **1** - **2** - **3**

1 Height (mm)

2 Anodising Color

B-Black

C-Clear

Z-Custom

3 Mounting Options - see graphics for details Combinations available

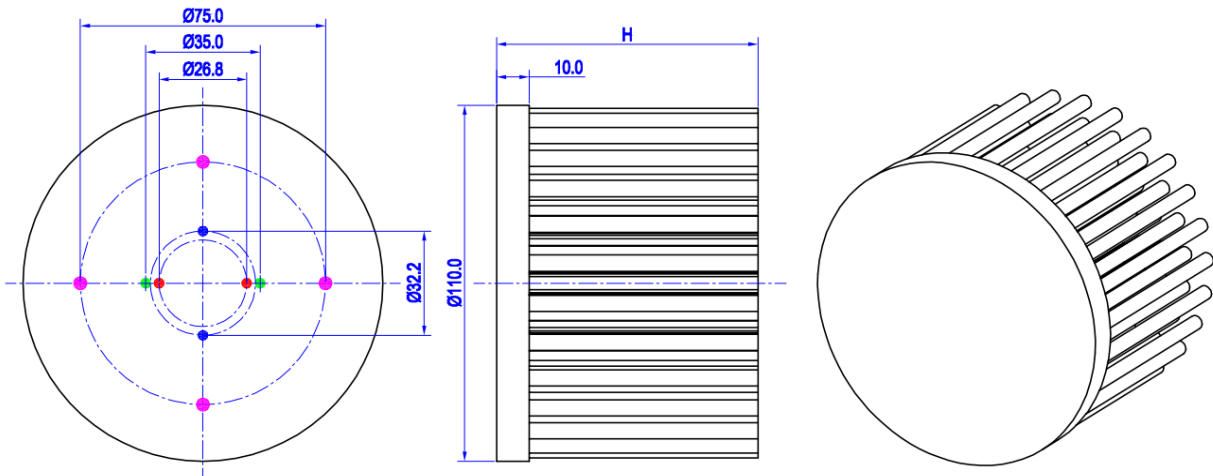
Ex.order code - 12

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 | Ronda series | | | |
| 1 | CLU036; CLU038 CLU721; CLU711 | / | FN13xxx-xx; FN14xxx-xx; FN15xxx-xx; | FN14637-S | FN15xxx-xx; | M3 | 6.5mm | 26.8mm/ 2-@180° |
| 2 | | / | | / | M3 | 6.5mm | 32.2mm/ 2-@180° | |
| 3 | CLU046; CLU048 CLU731 | BJB Holder 47.319.2030.50 | | / | / | M3 | 6.5mm | 35.0mm/ 2-@180° (Zhaga book 3) |
| | | AAG.STUCCHI 8102-G2 | | FN14637-S | FN15xxx-xx; | | | |
| | CLU036; CLU038 CLU721; CLU711 | BJB Holder 47.319.2021.50 AAG.STUCCHI 8101-G2 | | | | | | |
| 4 | LEDiL Lens | / | Stella Series | / | / | M4 | 8.5mm | 75.0mm/ 4-@90° |



GooLED

GooLED-CIT-11080 Pin Fin Heat Sink $\Phi 110\text{mm}$ for Citizen

The product data table

| | | |
|--|---|---------------------------------|
| | Model No. | GooLED-CIT-11080 |
| | Heatsink Size | $\Phi 110 \times H 80\text{mm}$ |
| | Heatsink Material | AL1070 |
| | Finish | Black Anodized |
| | Weight (g) | 617.0 |
| | Dissipated power (T _{hs-amb} , 50°C) | 44.0 (W) |
| | Cooling surface area (mm ²) | 129119 |
| | Thermal Resistance (R _{hs-amb}) | 1.14 (°C/W) |

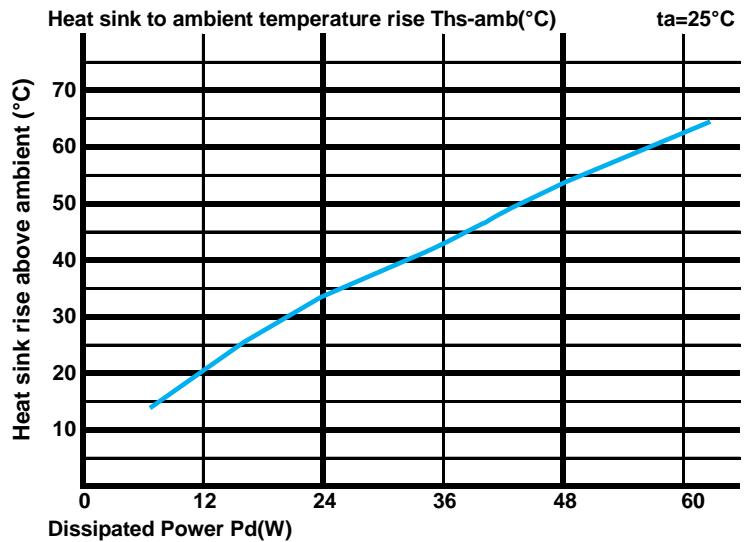
The thermal data table

* 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;

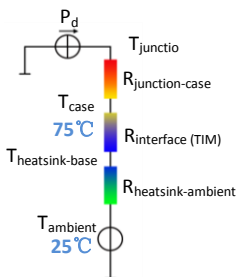
| Dissipated Power Pd(W) | Pd = Pe x (1- η_L) | Heat sink to ambient thermal resistance R _{hs-amb} (°C/W) | Heat sink to ambient temperature rise T _{hs-amb} (°C) |
|------------------------|--------------------------|--|--|
| | | GooLED-CIT-11080 | |
| 12.0 | | 1.67 | 20.0 |
| 24.0 | | 1.38 | 33.0 |
| 36.0 | | 1.17 | 42.0 |
| 48.0 | | 1.10 | 53.0 |
| 60.0 | | 1.03 | 62.0 |



*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:

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