

EtraLED

EtraLED-CIT-11050 Citizen Modular Passive Star LED Heat Sink Φ 110mm

Features VS Benefits

- * The EtraLED-CIT-11050 Citizen modular passive star LED heat sink 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 2,400 to 6,100 lumen.
- * Thermal resistance range R_{th} 1.22°C/W.
- * Modular design with mounting holes foreseen for direct mounting of citizen COB series.
- * Diameter 110mm - standard height 50mm Other heights on request.
- * Extruded 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 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.



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.

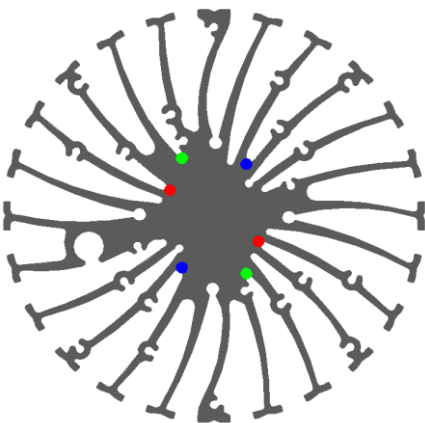
Citizen LED Modules directly Mounting Options

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.



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Mounting Options and Drawings & Dimensions

Example: EtraLED-CIT-11050-B-1,2

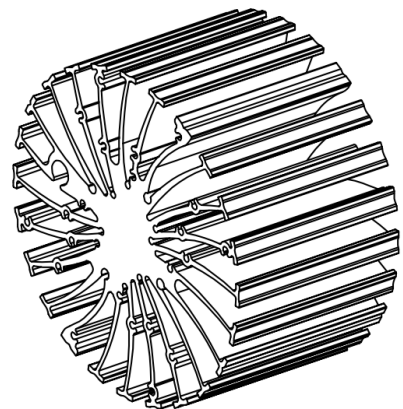
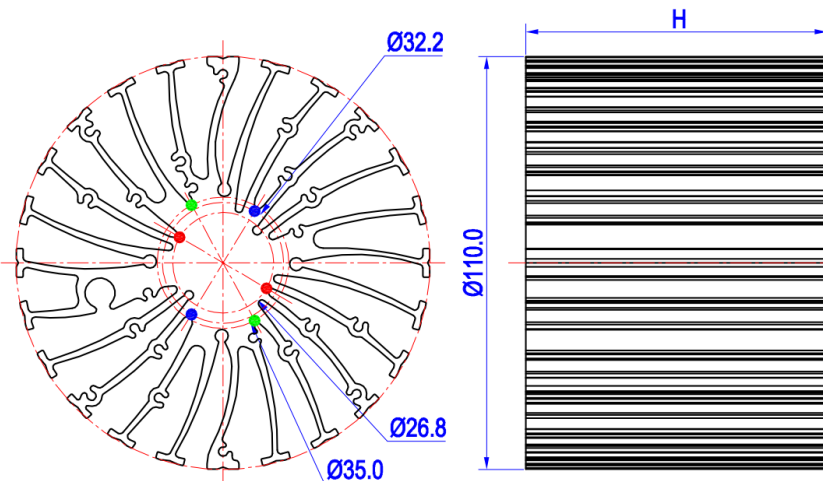
Example: EtraLED-CIT-110 **1** - **2** - **3**

- 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.	THREAD	THREAD DEPTH	THREAD HOLE DISTANCE
1	CLU036; CLU038 CLU721; CLU711	/	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			
	CLU036; CLU038 CLU721; CLU711	BJB Holder 47.319.2021.50			
		AAG.STUCCHI 8101-G2			



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The product data table

	Model No.	EtraLED-CIT-11050
	Heatsink Size	$\Phi 110 \times H50\text{mm}$
	Heatsink Material	AL6063-T5
	Finish	Black Anodized
	Weight (g)	414.0
	Dissipated power (T _{hs-amb} , 50°C)	41.0 (W)
	Cooling surface area (mm ²)	124084
	Thermal Resistance (R _{hs-amb})	1.22 (°C/W)

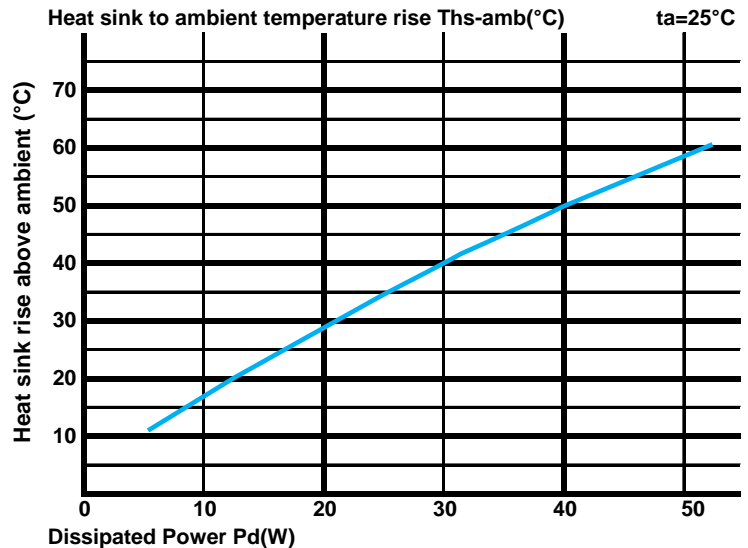
The thermal data table

* 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;

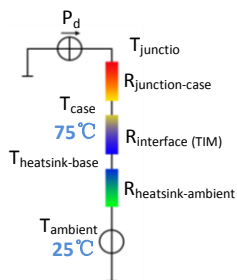
Dissipated Power Pd(W)	Pd = Pe x (1- η_L)	Heat sink to ambient thermal resistance R _{hs-amb} (°C/W)	Heat sink to ambient temperature rise T _{hs-amb} (°C)
		EtraLED-CIT-11050	
10.0		1.60	16.0
20.0		1.40	28.0
30.0		1.33	40.0
40.0		1.23	49.0
50.0		1.16	58.0



*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: $\theta = (T_{hs} - T_a) / P_d$

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:

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