

xLED

xLED-CIT-8050 Pin Fin Heat Sink Φ 80mm for Citizen

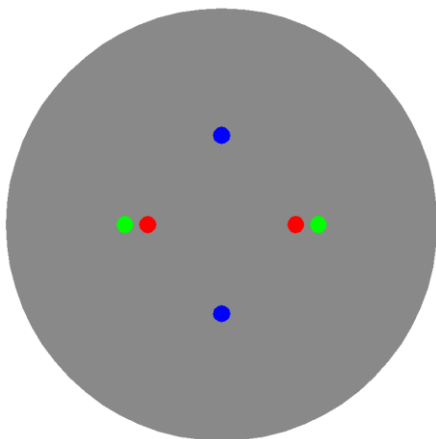
Features VS Benefits

- * The xLED-CIT-8050 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 1,100 to 3,400 lumen.
- * Thermal resistance range R_{th} 2.38°C/W.
- * Modular design with mounting holes foreseen for direct mounting of citizen COB series.
- * Diameter 80mm - 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 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.

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:
Olivia series: FN14637-S
Ronda series: FN15xxx-xx;

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Mounting Options and Drawings & Dimensions

Example: xLED-CIT-8050-B-1,2

Example: xLED-CIT-80 **1** - **2** - **3**

1 Height (mm)

2 Anodising Color

B-Black

C-Clear

Z-Custom

3 Mounting Options - see graphics for details Combinations available

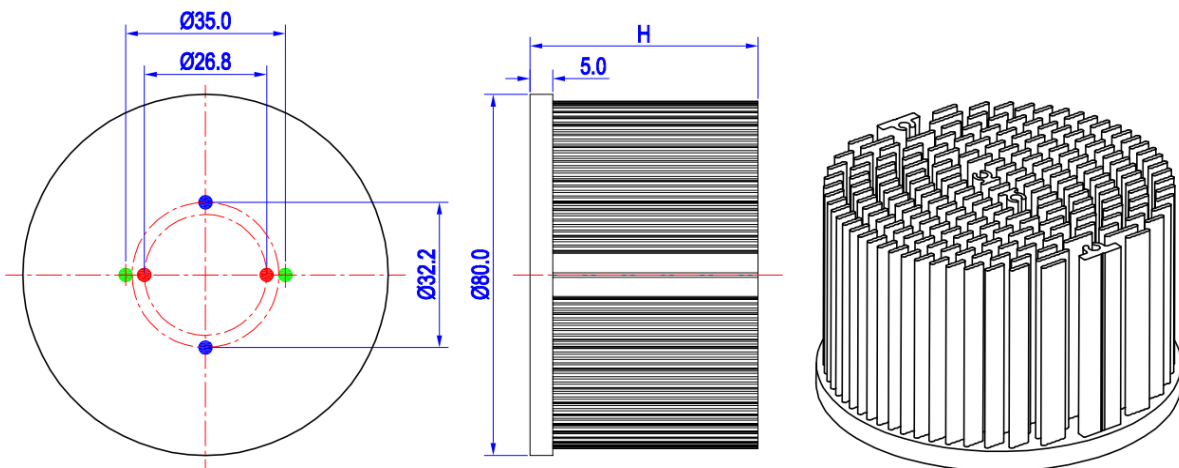
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means option 1 and 2 combined

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	CLU036; CLU038 CLU721; CLU711	/	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					
	CLU036; CLU038 CLU721; CLU711	BJB Holder 47.319.2021.50	FN14637-S	FN15xxx-xx;			
		AAG.STUCCHI 8101-G2					



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The product data table

	Model No.	xLED-CIT-8050
	Heatsink Size	$\Phi 80 \times H 50\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	197.0
	Dissipated power (Ths-amb,50°C)	21.0 (W)
	Cooling surface area (mm²)	120774
	Thermal Resistance (Rhs-amb)	2.38 (°C/W)

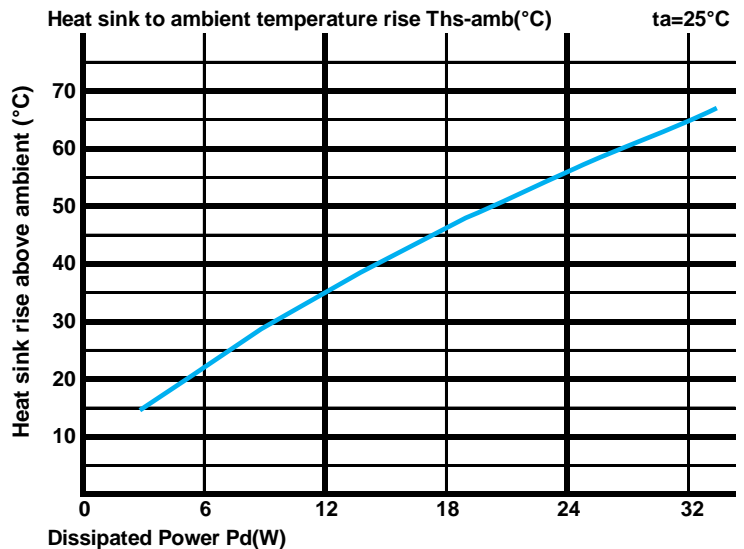
The thermal data table

* 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;

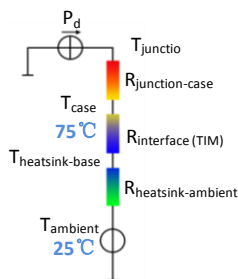
Dissipated Power Pd(W)	Heat sink to ambient thermal resistance Rhs-amb (°C/W)		Heat sink to ambient temperature rise Ths-amb (°C)	
	xLED-CIT-8050			
6.0	3.50	21.0		
12.0	2.92	35.0		
18.0	2.56	46.0		
24.0	2.29	55.0		
32.0	2.00	64.0		



* 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] ; 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_{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:

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