xLED

xLED-CIT-7050 Pin Fin Heat Sink Φ70mm for Citizen

Features VS Benefits

* The xLED-CIT-7050 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 1,000 to 2,600 lumen.
* Thermal resistance range Rth 3.13°C/W.
* Modular design with mounting holes foreseen for direct mounting of citizen 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

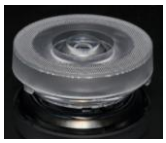
* Below you find an overview of Citizen COB's and LED modules which standard fit on the Pin Fin LED Heat Sinks.
* In this way mechanical after work and related costs can be avoided, and lighting designers can standardize their designs on a limited number of LED Pin Fin LED Heat Sink.

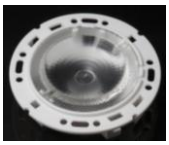
CITIZEN Micro HumanTech

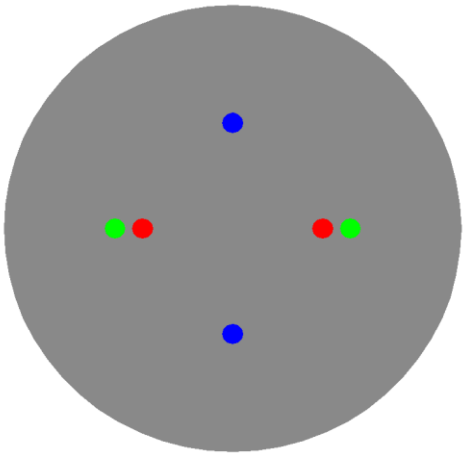
BJB

A.A.G. STUCCHI ideas are made of light

LEDiL







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-7050-B-1,2

Example:xLED-CIT-70 1 - 2 - 3

1 Height (mm)

2 Anodising Color

B-Black

C-Clear

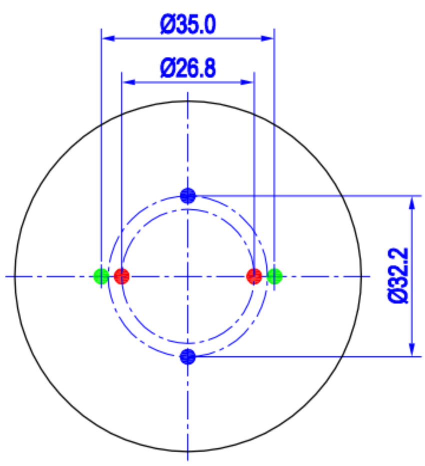
Z-Custom

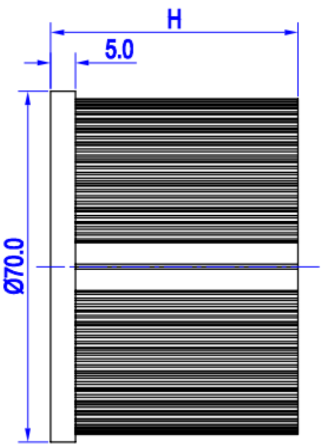
3 Mounting Options - see graphics for details Combinations available Ex.order code - 12 means option 1 and 2 combined

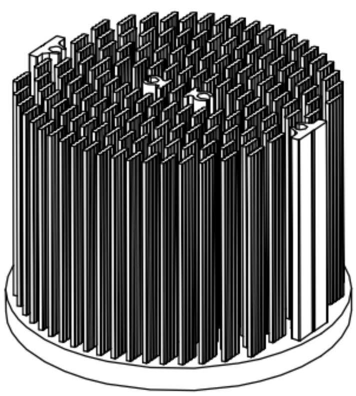
Notes:

- 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	CLU036; CLU038 CLU721; CLU711	/	FN14637-S	FN15xxx-xx;	M3	6.5mm	26.8mm/ 2-@180°
2	CLU046; CLU048 CLU731	/	/	/	M3	6.5mm	32.2mm/ 2-@180°
3		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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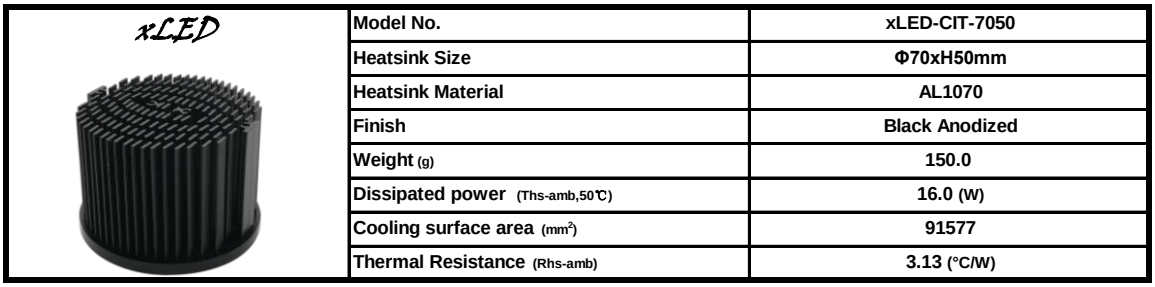
The product deta table



Model No.	xLED-CIT-7050
Heatsink Size	Φ70xH50mm
Heatsink Material	AL1070
Finish	Black Anodized
Weight (g)	150.0
Dissipated power (Ths-amb,50℃)	16.0 (W)
Cooling surface area (mm^2)	91577
Thermal Resistance (Rhs-amb)	3.13 (°C/W)

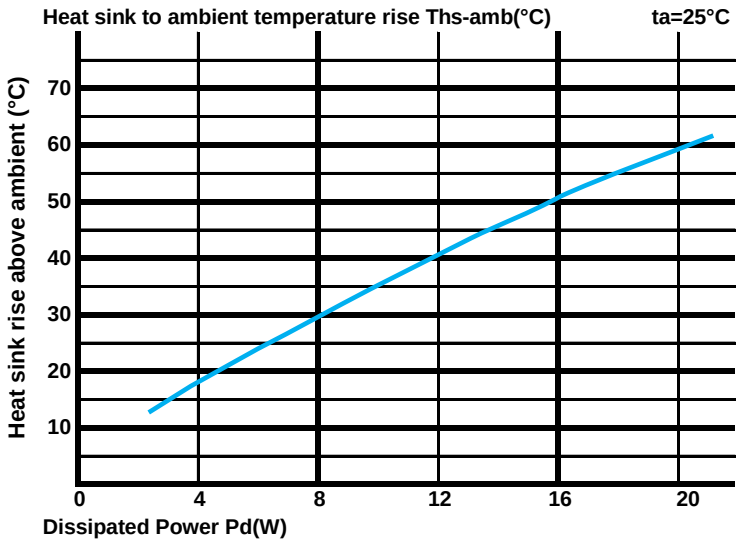
The thermal data table

* 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 effciency of the LED module;

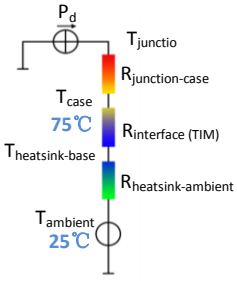
Pd = Pe x (1-ηL)		Heat sink to ambient thermal resistance Rhs-amb (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
		xLED-CIT-7050	
Dissipated Power Pd(W)	4.0	4.25	17.0
	8.0	3.63	29.0
	12.0	3.33	40.0
	16.0	3.13	50.0
	20.0	2.95	59.0



*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: θ =(Ths−Ta)/Pd

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 $R_{junction-case}$, 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:

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

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