GooLED

XSA-318 Pin Fin LED Heat Sink Φ48mm for Xicato

Features VS Benefits

* The XSA-318 Xicato Pin Fin LED Heat Sinks are specifically designed for luminaires using the Xicato 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 600 to 1,800 lumen.
* Thermal resistance range Rth 4.35°C/W.
* Xicato Thermal Class **E** , (60° tilt angle, 40°C ambient) .
* Modular design with mounting holes foreseen for direct mounting of Xicato XSA/ XIM/ XTM modules.
* Diameter 48.0mm - standard height 68.0mm,Other heights on request.
* Forged from highly conductive aluminum.

*The XSA-318 Xicato Pin Fin Heat Sink is standard foreseen from a variety of mounting holes which allow direct mounting of all Xicato Spot and down light LED modules and secondary optics on the Pin Fin LED heat sink.

*In this way mechanical afterwork and related costs can be avoided, and lighting designers can standardize their designs on a limited number of LED coolers.

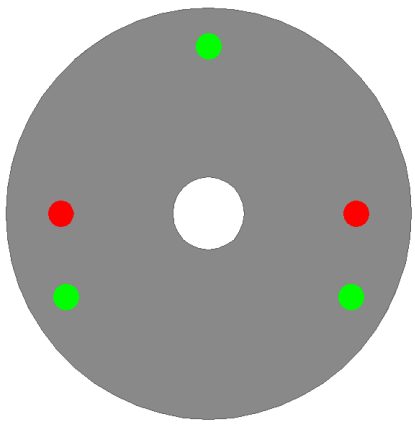
*Below you find an overview of Xicato LED modules which standard fit on the XSA-318 Pin Fin LED Heat Sinks.

*MingFa performs thermal validation tests on each of the LED modules mounted on the LED cooler and publishes.

*This data in the Xicato Cooler thermal validation reports.

*For a full overview of avaliable LED coolers for Xicato LEDs, please refer to the Xicato LED cooler overview on.

XICATO



Xicato LED Modules directly Mounting Options

Xicato XSM LED modules name :

XSM8027-xxxx ; XSM9530-xxxx ;
XSM8030-xxxx ; XSM9540-xxxx ;
XSM8040-xxxx ; XSMV830-xxxx ;
XSM9527-xxxx ;

Direct mounting with 3 screwsM3 x 12mm;
Green indicator marks.

Xicato XIM LED modules name :

XIM198027-xxx ; XIM198040-xxx ; XIM09-V9xxxxxx ;
XIM198030-xxx ; XIM19V830-xxx ;
XIM198035-xxx ; XIM0980 xxxxxx ;

Direct mounting with 3 screws M3 x 20mm;
Green indicator marks.

Xicato XTM LED modules:

XTM19-8027-xxx ; XTM19-8040-xxx ; XTM0995 xxxxxx ;
XTM19-8030-xxx ; XTM19-V830-xxx ;
XTM19-8035-xxx ; XTM09-V9xxxxxx ;

Direct mounting with 3 screws M3 x 10mm;
Green indicator marks.
Direct mounting by Zhaga mounting holes with 2 screws M3 x 8mm;
Red indicator marks.

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Mounting Options and Drawings & Dimensions

Example: XSA-318-M3-B-1

Example: XSA-318-M3-[1]-[2]

[1] Anodising Color

B-Black

C-Clear

Z-Custom

[2] Mounting Options - see graphics for details Combinations available

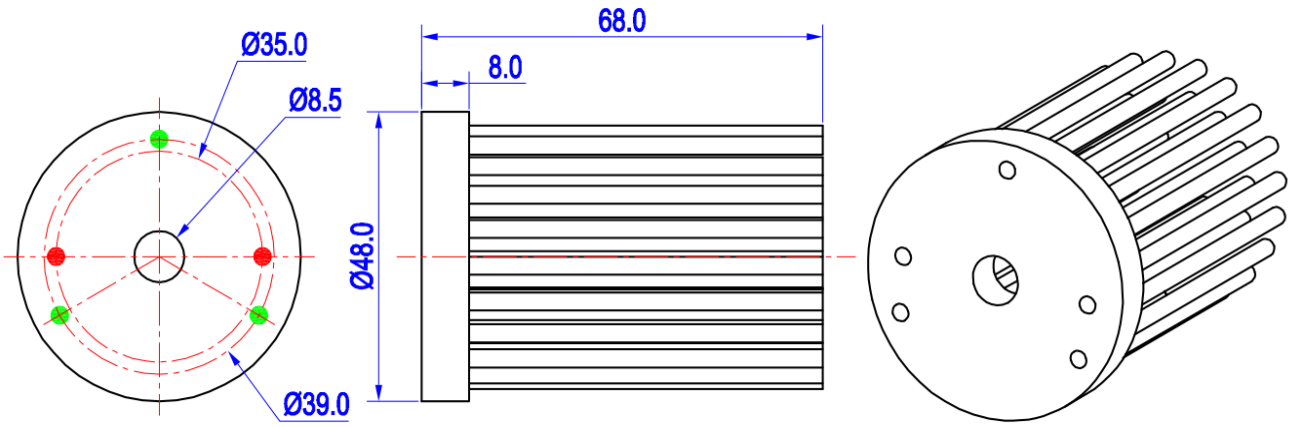
Ex.order code - 12

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	PART NUMBER	THREAD	THREAD DEPTH	THREAD HOLE DISTANCE
N	XSA-318-M3-#-N	M3	6.5mm	39.0mm/ 3-@120°
1	XSA-318-M3-#-1	M3	6.5mm	35.0mm/ 2-@180° (Zhaga Book 3)
2	XSA-318-M3-#-2	M3	Φ8.5mm	Through-Hole



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The product deta table

Model No.	XSA-318
Heatsink Size	Φ48xH68mm
Heatsink Material	AL1070
Finish	Black Anodized
Weight (g)	93.0
Dissipated power (Ths-amb,50℃)	11.5 (W)
Cooling surface area (mm^2)	31383
Thermal Resistance (Rhs-amb)	4.35 (°C/W)

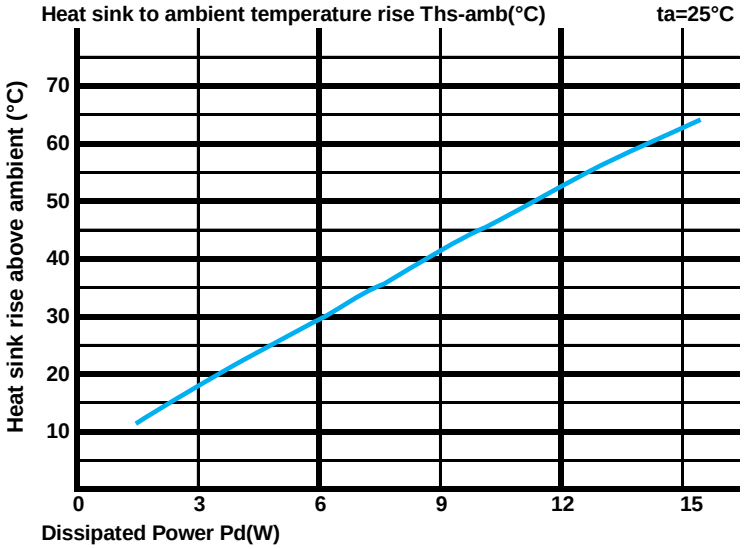
The thermal data table

* 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;

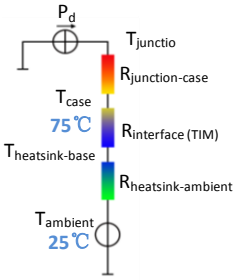
Pd = Pe x (1-ηL)		Heat sink to ambient thermal resistance Rhs-amb (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
		XSA-318	
Dissipated Power Pd(W)	3.0	6.00	18.0
	6.0	4.83	29.0
	9.0	4.56	41.0
	12.0	4.33	52.0
	15.0	4.13	62.0



*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: 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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