



GoLED

XSA-321 Pin Fin LED Heat Sink Φ 68mm for Xicato

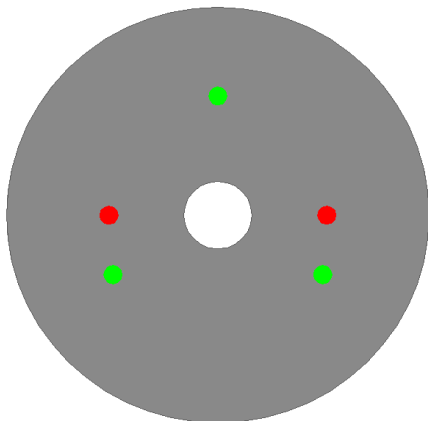
Features VS Benefits

- * The XSA-321 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 800 to 2,100 lumen.
- * Thermal resistance range Rth 4.0°C/W.
- * Xicato Thermal Class F , (60° tilt angle, 40°C ambient) .
- * Modular design with mounting holes foreseen for direct mounting of Xicato XSA/ XIM/ XTM modules.
- * Diameter 68.0mm - standard height 30.0mm, Other heights on request.
- * Forged from highly conductive aluminum.



- *The XSA-321 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-321 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 available 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 screws M3 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.

Mounting Options and Drawings & Dimensions

Example: XSA-321-M3-B-1

Example: XSA-321-M3-**1**-**2**

1 Anodising Color

- B-Black
- C-Clear
- Z-Custom

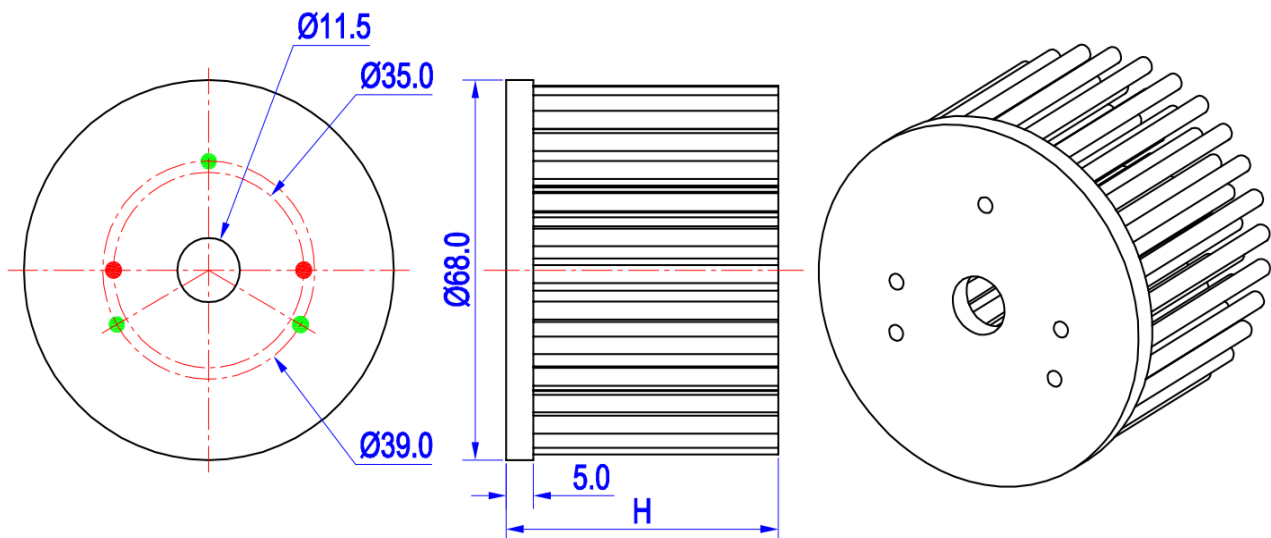
2 Mounting Options - see graphics for details Combinations available

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-321-M3-#-N	M3	6.5mm	39.0mm/ 3-@120°
1	XSA-321-M3-#-1	M3	6.5mm	35.0mm/ 2-@180° (Zhaga Book 3)
2	XSA-321-M3-#-2	M3	Φ 11.5mm	Through-Hole



The product data table

	Model No.	XSA-321
	Heatsink Size	Φ68xH30mm
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	108.0
	Dissipated power (T_{hs-amb},50°C)	12.5 (W)
	Cooling surface area (mm²)	36775
	Thermal Resistance (R_{hs-amb})	4.0 (°C/W)

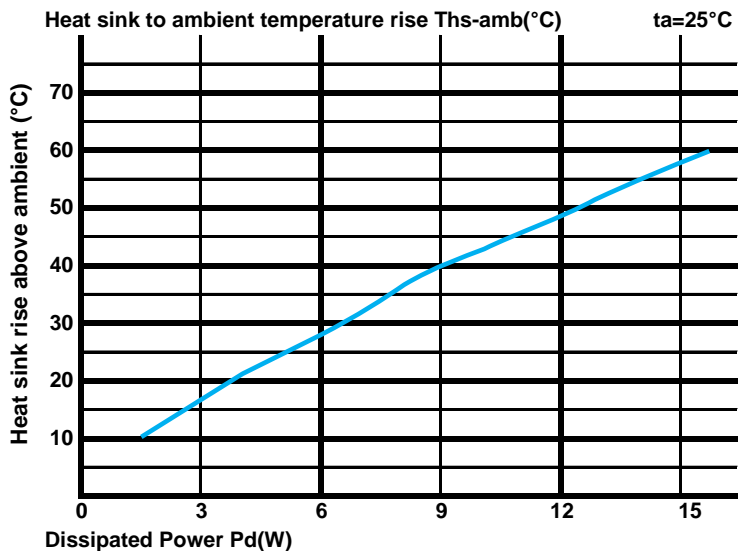
The thermal data table

* 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 efficiency of the LED module;

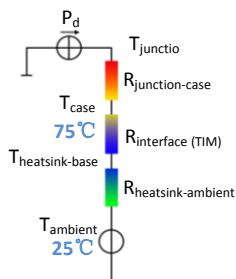
Dissipated Power Pd(W)	Pd = Pe x (1-ηL)	Heat sink to ambient thermal resistance R _{hs-amb} (°C/W)	Heat sink to ambient temperature rise T _{hs-amb} (°C)
		XSA-321	
3.0		5.67	17.0
6.0		4.67	28.0
9.0		4.44	40.0
12.0		4.08	49.0
15.0		3.87	58.0



*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:

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