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# XSA-325 Pin Fin LED Heat Sink Φ78mm for Xicato

## Features VS Benefits

* The XSA-325 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 1,000 to 2,700 lumen.
* Thermal resistance range Rth 3.03°C/W.
* Xicato Thermal Class **J** , ( 60° tilt angle, 40°C ambient ) .
* Modular design with mounting holes foreseen for direct mounting of Xicato XSA/ XIM/ XTM modules.
* Diameter 78.0mm - standard height 30.0mm,Other heights on request.
* Forged from highly conductive aluminum.

*The XSA-325 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.

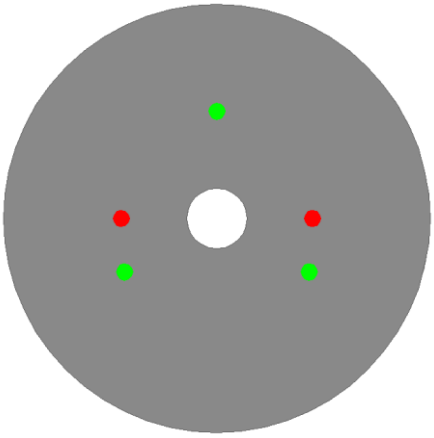
*Below you find an overview of Xicato LED modules which standard fit on the XSA-325 Pin Fin LED Heat Sinks.

*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-325-M3-B-1**

**Example: XSA-325-M3-[1]-[2]**

**[1] Anodising Color**

**B-Black**

**C-Clear**

**Z-Custom**

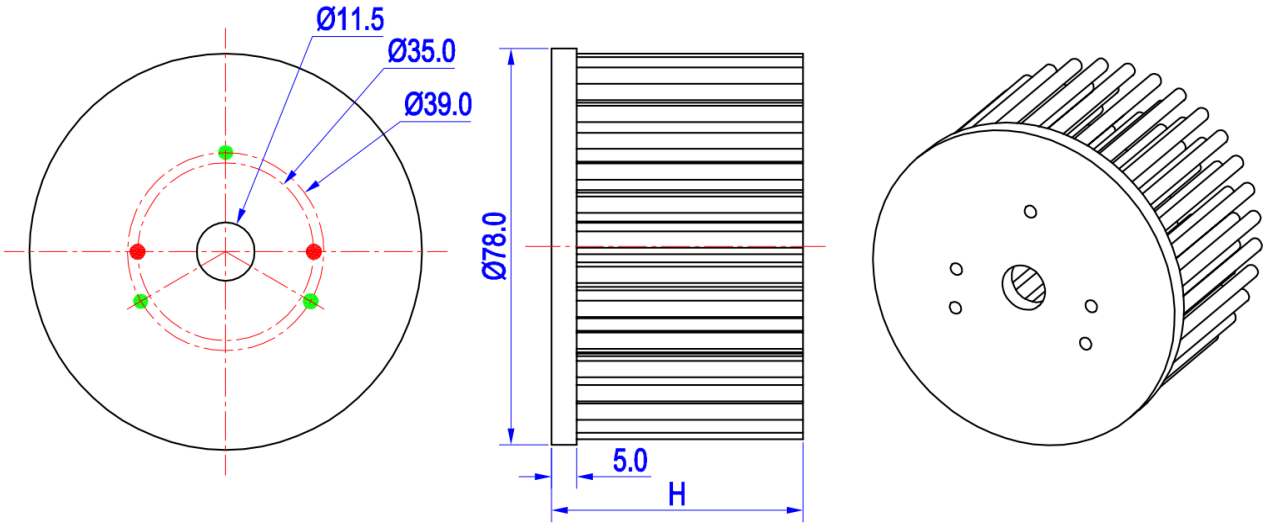
**[2] Mounting Options - see graphics for details Combinations available**

**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-325-M3-#-N | M3 | 6.5mm | 39.0mm/ 3-@120° |
| 1 | XSA-325-M3-#-1 | M3 | 6.5mm | 35.0mm/ 2-@180° (Zhaga Book 3) |
| 2 | XSA-325-M3-#-2 | M3 | Φ11.5mm | Through-Hole |

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## XSA-325 Pin Fin LED Heat Sink Φ78mm for Xicato

### The product deta table

| | |
|---|---|
| **Model No.** | **XSA-325** |
| **Heatsink Size** | **Φ78xH30mm** |
| **Heatsink Material** | **AL1070** |
| **Finish** | **Black Anodized** |
| **Weight (g)** | **138.0** |
| **Dissipated power (Ths-amb,50℃)** | **16.5 (W)** |
| **Cooling surface area ($mm^2$)** | **46643** |
| **Thermal Resistance (Rhs-amb)** | **3.03 (°C/W)** |

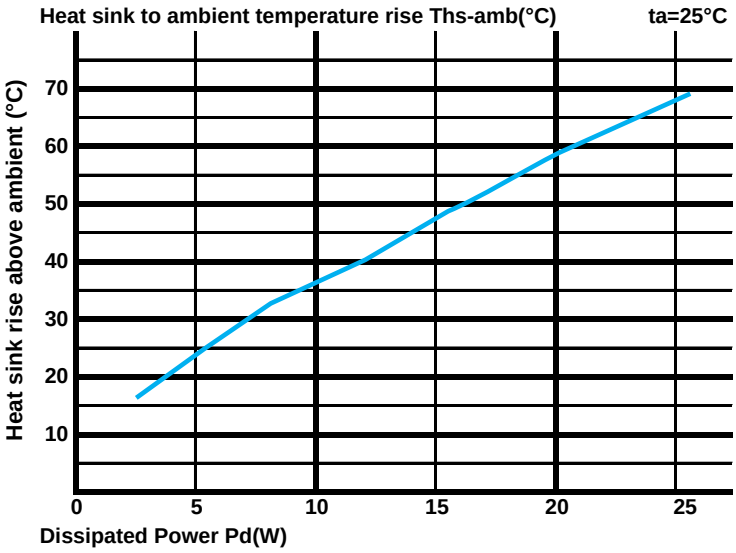
### The thermal data table

* 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;

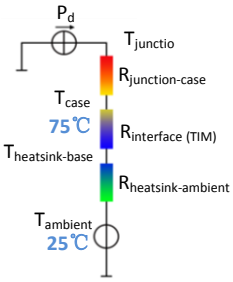
| Pd = Pe x (1-ηL) | | Heat sink to ambient thermal resistance Rhs-amb (°C/W) | Heat sink to ambient temperature rise Ths-amb (°C) |
|---|---|---|---|
| | | XSA-325 | |
| Dissipated Power Pd(W) | 5.0 | 4.80 | 24.0 |
| | 10.0 | 3.60 | 36.0 |
| | 15.0 | 3.13 | 47.0 |
| | 20.0 | 2.95 | 59.0 |
| | 25.0 | 2.72 | 68.0 |




*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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