xLED

xLED-XIT-4568 Pin Fin LED Heat Sink Φ45mm for Xicato

Features VS Benefits

* The xLED-XIT-4568 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 300 to 1,400 lumen.
* Thermal resistance range Rth 4.76°C/W.
* Modular design with mounting holes foreseen for direct mounting of Xicato XSA/ XIM/ XTM modules.
* Diameter 45.0mm - standard height 68.0mm,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 Seoul 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.

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.
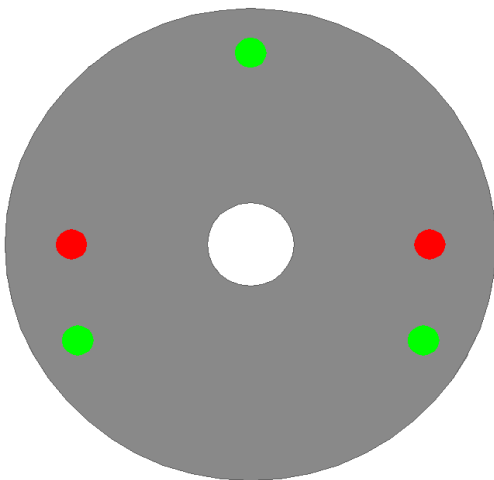
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Mounting Options and Drawings & Dimensions

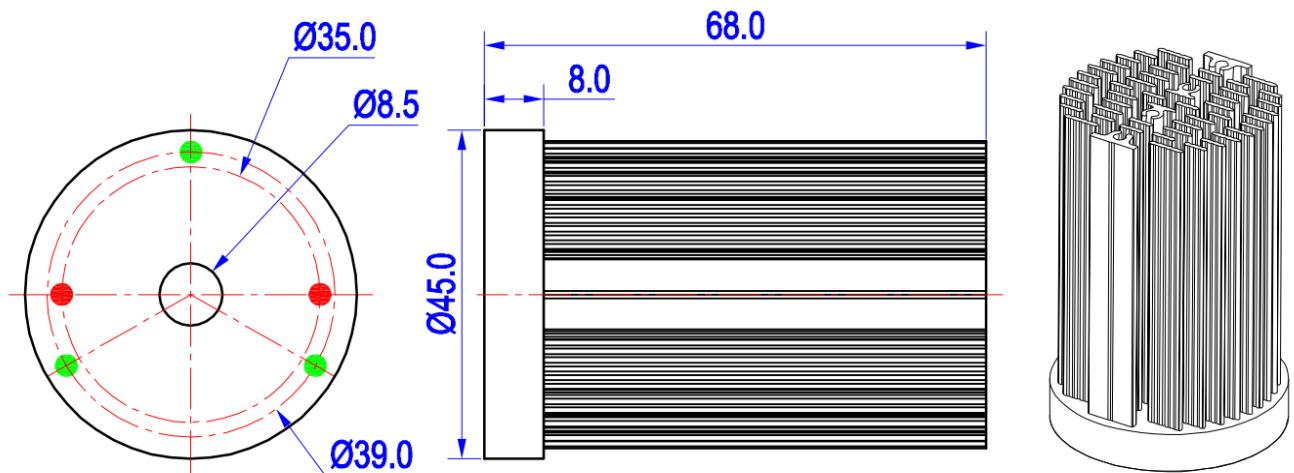**Example: xLED-XIT-4568-M3-B-1**

Example: xLED-XIT-4568-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	xLED-XIT-4568-M3-#-N	M3	6.5mm	39.0mm/ 3-@120°
1	xLED-XIT-4568-M3-#-1	M3	6.5mm	35.0mm/ 2-@180° (Zhaga Book 3)
2	xLED-XIT-4568-M3-#-2	M3	Φ8.5mm	Through-Hole

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xLED-XIT-4568 Pin Fin LED Heat Sink Φ45mm for Xicato

The product deta table

Model No.	xLED-XIT-4568
Heatsink Size	Φ45xH68mm
Heatsink Material	AL1070
Finish	Black Anodized
Weight (g)	90.0
Dissipated power (Ths-amb,50℃)	10.5 (W)
Cooling surface area (mm²)	49775
Thermal Resistance (Rhs-amb)	4.76 (°C/W)

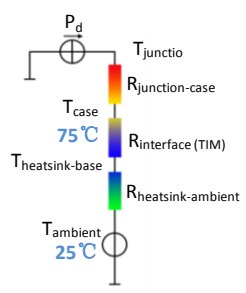### The thermal data table

* 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-XIT-4568	
Dissipated Power Pd(W)	3.0	7.00	21.0
	6.0	5.50	33.0
	9.0	5.00	45.0
	12.0	4.58	55.0
	15.0	4.27	64.0

Heat sink to ambient temperature rise Ths-amb(°C)   ta=25°C
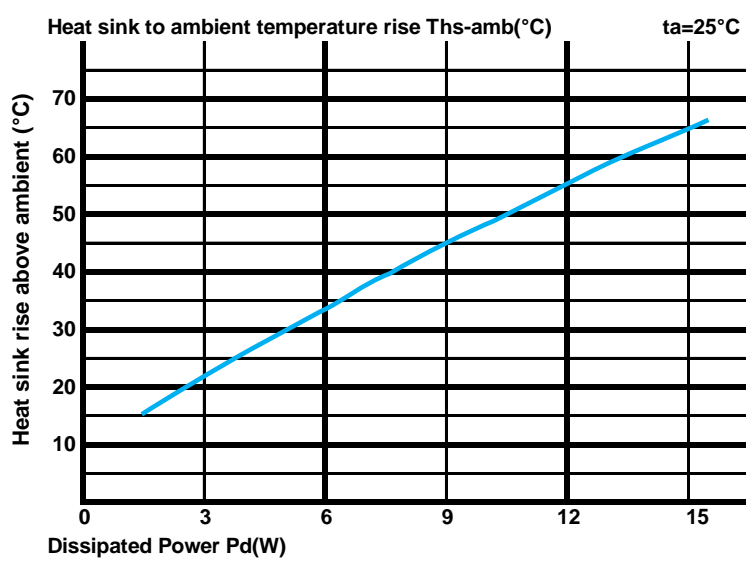
*The aluminum substrate side of the package outer shell is thermally connected to the heat sink via TIM (Thermal interface material).

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.

P_d
$T_{junctio}$
$R_{junction-case}$
T_{case} 75℃
$R_{interface (TIM)}$
$T_{heatsink-base}$
$R_{heatsink-ambient}$
$T_{ambient}$ 25℃

*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: $\theta = (Ths - Ta)/Pd$

θ - Thermal Resistance [℃/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 $R_{interface (TIM)}$ [℃/W], the thermal resistance with the heat sink is $R_{heatsink-ambient}$ [℃/W], and the ambient temperature is $T_{ambient}$ [℃].

*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:

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