xLED

xLED-LUME-4530 Pin Fin Heat Sink Φ60mm for Lumens

Features VS Benefits

* The xLED-LUME-4530 Lumens Pin Fin LED Heat Sinks are specifically designed for luminaires using the Lumens 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 1,200 lumen.
* Thermal resistance range Rth 7.14°C/W.
* Modular design with mounting holes foreseen for direct mounting of Lumens Ergon COB series, and AC-ALL series LED engines.
* Diameter 45.0mm - standard height 30.0mm Other heights on request.
* Forged from highly conductive aluminum.

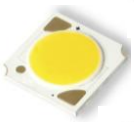
Zhaga LED engine and radiator assembly is a unified future international standardization

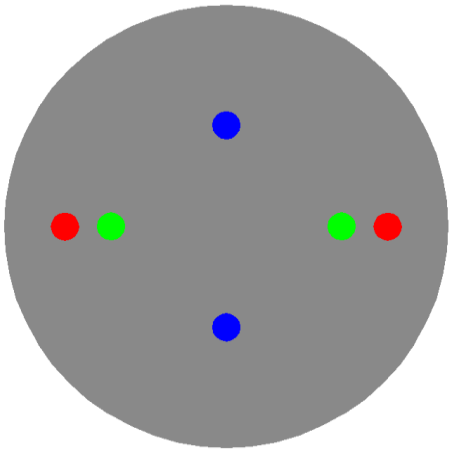
* Below you find an overview of Lumens COB's and LED modules which standard fit on the Pin Fin LED Heat Sinks.
* In this way mechanical after work and related costs can be avoided, and lighting designers can standardize their designs on a limited number of LED Pin Fin LED Heat Sink.

LUMENS

BJB

IDEAL





Lumens LED Modules directly Mounting Options

Lumens Ergon COB_HO, COB_HO+, COB_HE Series :

ERC1812xxxxHO; ERC1812xxxxHE;
ERC1820xxxxHO; ERC1820xxxxHE;

With the Zhaga Book 3 holders for the red indicator marks.
(Ideal Holder:50-2101CR);
(BJB holder:47.319.2131.50);
Without the holders for the green indicator marks.
Direct mounting with machine screws M3x6.5mm.

Lumens Ergon COB_HO, COB_HO+, COB_HE Series :

ERC1507xxxxHO; ERC1507xxxxHO+;
ERC1512xxxxHO; ERC1512xxxxHO+;
ERC1507xxxxHE;

With the Zhaga Book 11 holders for the green indicator marks.
IDEAL Holder:50-2001CR;
BJB Holder:47.319.6104.50;
Without the holders for the blue indicator marks.
Direct mounting with machine screws M3x6.5mm.

Lumens AC-ALL Series :

EDC/38C/8W/xxx/120V/B EDC/38C/8W/xxx/230V/A;
EDC/47C/10W/xxx/120V/B; EDC/47C/10W/xxx/230V/A;
EDC/47C/12W/xxx/120V/B; EDC/47C/12W/xxx/230V/A;
EDC/47C/15W/xxx/120V/B; EDC/47C/15W/xxx/230V/A;

With the Zhaga Book 3 holders for the red indicator marks.
Direct mounting with machine screws M3x6.5mm.
Please refer to the www.lumensleds.com data provided on the manual.

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Mingfa TECH

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Mounting Options and Drawings & Dimensions

Example:xLED-LUME-4530-B-1,2

Example:xLED-LUME-45 1 - 2 - 3

1 Height (mm)

2 Anodising Color

B-Black

C-Clear

Z-Custom

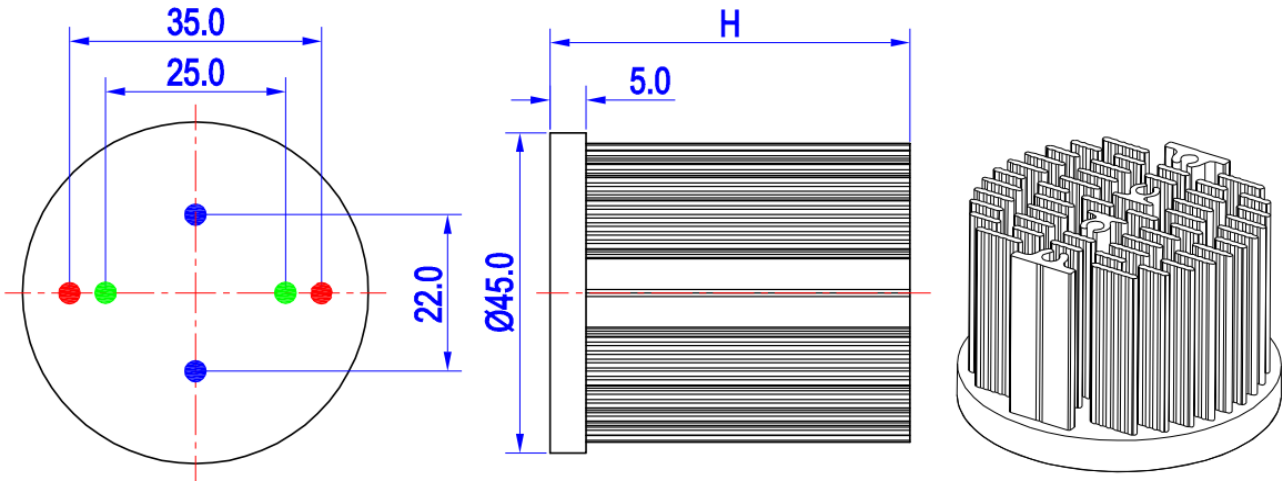
3 Mounting Options - see graphics for details Combinations available

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.	THREAD	THREAD DEPTH	THREAD HOLE DISTANCE
1	Ergon COB (15.85×15.85)	/	M3	6.5mm	22.0mm/ 2-@180°
2	Ergon COB (17.85×17.85)	/	M3	6.5mm	25.0mm/ 2-@180° (Zhaga book 11)
	Ergon COB (15.85×15.85)	BJB Holder 47.319.6104.50			
		Ideal Holder 50-2001CR			
3	AC-ALL Series	Lumens	M3	6.5mm	35.0mm/ 2-@180° (Zhaga book 3)
	Ergon COB (17.85×17.85)	BJB Holder 47.319.2131.50			
		Ideal Holder 50-2101CR			



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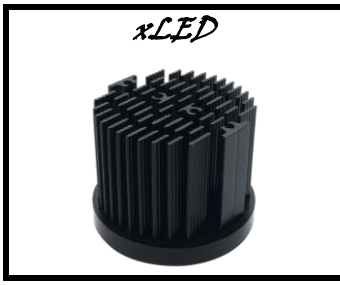
The product deta table



Model No.	**xLED-LUME-4530**
Heatsink Size	**Φ45xH30mm**
Heatsink Material	**AL1070**
Finish	**Black Anodized**
Weight (g)	**45.0**
Dissipated power (Ths-amb,50℃)	**7.0 (W)**
Cooling surface area (mm^2)	**22830**
Thermal Resistance (Rhs-amb)	**7.14 (°C/W)**

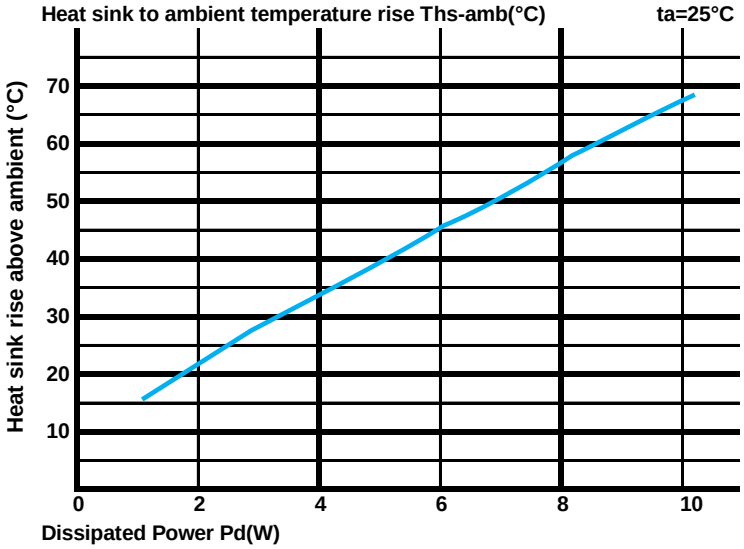
The thermal data table

* 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;

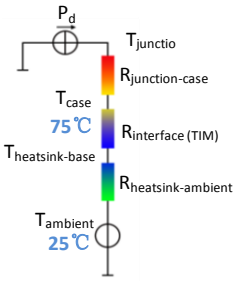
Pd = Pe x (1-ηL)		Heat sink to ambient thermal resistance Rhs-amb (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
		xLED-LUME-4530	
Dissipated Power Pd(W)	2.0	10.50	21.0
	4.0	8.50	34.0
	6.0	7.50	45.0
	8.0	7.00	56.0
	10.0	6.70	67.0



*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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