



# LED

**xLED**

## xLED-LUME-4568 Pin Fin Heat Sink $\Phi$ 60mm for Lumens

### Features VS Benefits

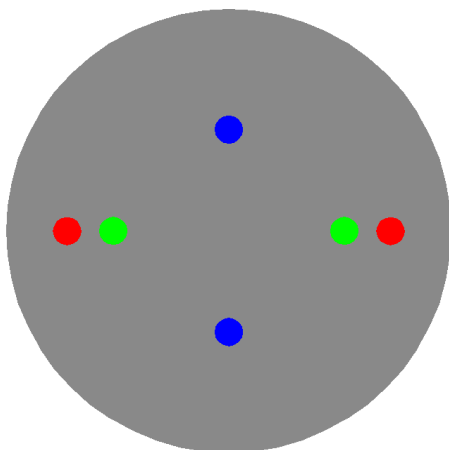
- \* The xLED-LUME-4568 Lumens Pin Fin LED Heat Sinks are specifically designed for luminaires using the Lumens LED engines.
- \* Mechanical compatibility with direct mounting of the LED engines to the LED cooler and thermal performance matching the lumen packages.
- \* For spotlight and downlight designs from 300 to 1,400 lumen.
- \* Thermal resistance range Rth 4.76°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 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 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**



### 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](http://www.lumensleds.com) data provided on the manual.

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## Mounting Options and Drawings & Dimensions

Example:xLED-LUME-4568-B-1,2

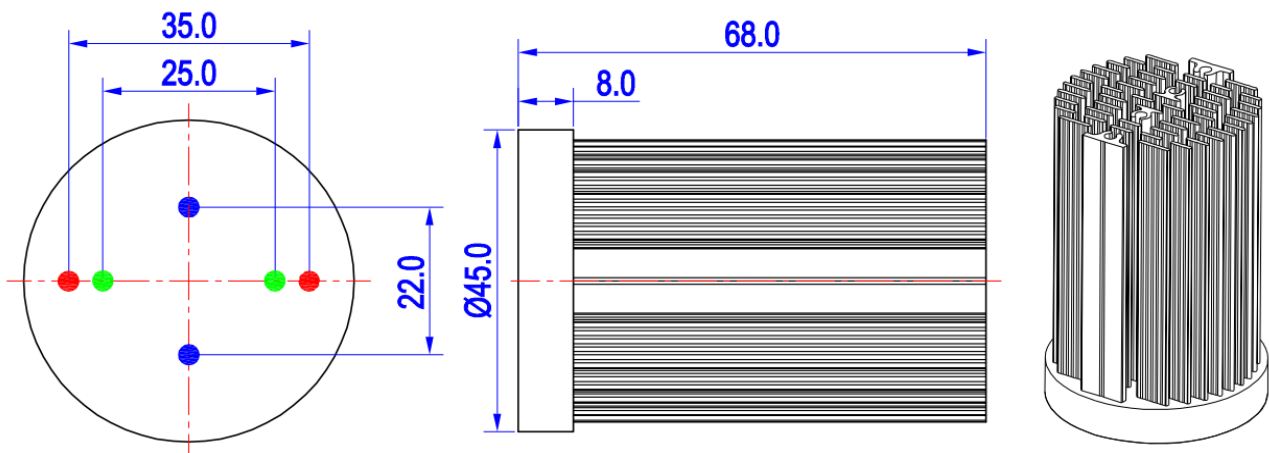
Example:xLED-LUME-45 **1** - **2** - **3**

- 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 (15.85x15.85)	/	M3	6.5mm	22.0mm/ 2-@180°
2	Ergon COB (17.85x17.85)	/	M3	6.5mm	25.0mm/ 2-@180° (Zhaga book 11)
	Ergon COB (15.85x15.85)	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 (17.85x17.85)	BJB Holder 47.319.2131.50 Ideal Holder 50-2101CR			



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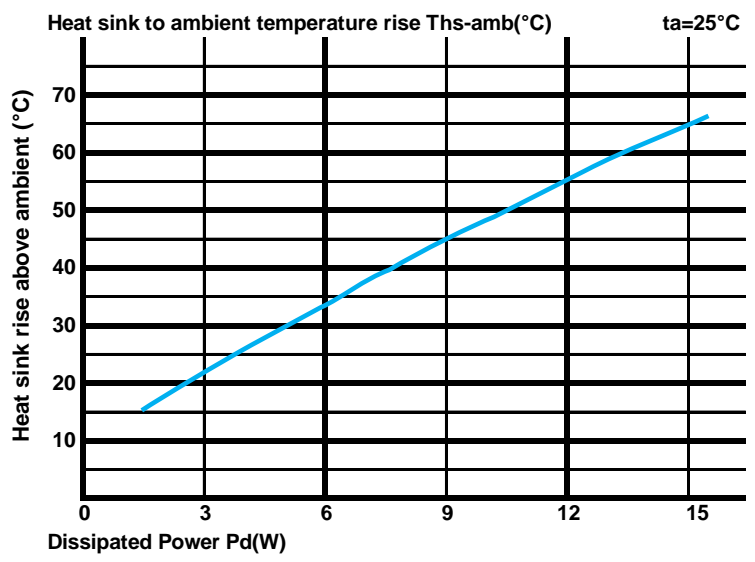
The product data table

	Model No.	xLED-LUME-4568
	Heatsink Size	Φ45xH68mm
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	90.0
	Dissipated power (Ths-amb,50°C)	10.5 (W)
	Cooling surface area (mm <sup>2</sup> )	49775
	Thermal Resistance (Rhs-amb)	4.76 (°C/W)

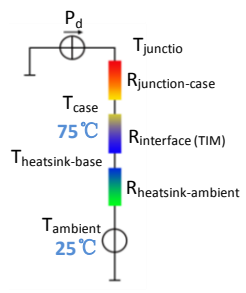
The thermal data table

\* 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 efficiency of the LED module;

Dissipated Power Pd(W)	Heat sink to ambient thermal resistance Rhs-amb (°C/W)		Heat sink to ambient temperature rise Ths-amb (°C)	
	xLED-LUME-4568			
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		



\*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:  $\theta = (Ths - Ta) / Pd$   
 $\theta$  - 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:  
 $T_{junction} = (R_{junction-case} + R_{case-ambient}) \cdot Pd + T_{ambient}$