GooLED

GooLED-LUME-6860 Pin Fin Heat Sink Φ68mm for Lumens

Features VS Benefits

* The GooLED-LUME-6860 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 1,000 to 2,800 lumen.
* Thermal resistance range Rth 2.94°C/W.
* Modular design with mounting holes foreseen for direct mounting of Lumens Ergon COB series,
  and AC-ALL series LED engines.
* Diameter 68.0mm - standard height 60.0mm 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.
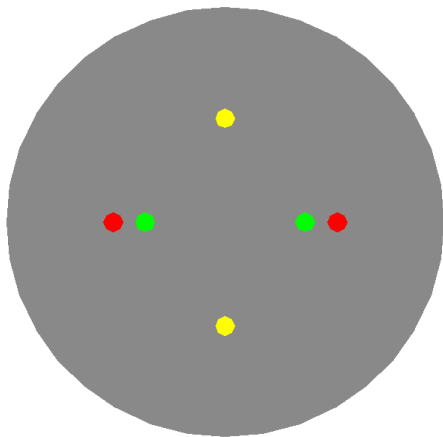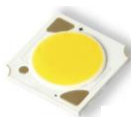
Lumens LED Modules directly Mounting Options

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 :

ERC2520xxxxHO;	ERC2530xxxxHE;
ERC2530xxxxHO;	ERC2540xxxxHE;
ERC2540xxxxHO;	ERC2530xxxxHO+
ERC2520xxxxHO+	

With the Zhaga Book 3 holders for the red indicator marks.
(Ideal Holder:50-2102CR);   (BJB Holder:47.319.2141.50);
Without the holders for the yellow indicator marks.
Direct mounting with machine screws M3x6.5mm.

Lumens AC-ALL Series :

EDC/47C/15W/xxx/120V/B;	EDC/47C/15W/xxx/230V/A;
EDC/57C/20W/xxx/120V/B;	EDC/57C/20W/xxx/230V/A;
EDC/57C/30W/xxx/120V/B;	EDC/57C/30W/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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## Mounting Options and Drawings & Dimensions

Example:GooLED-LUME-6860-B-1,2

Example:GooLED-LUME-68 `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 (17.85×17.85)	/	M3	6.5mm	25.0mm/ 2-@180°
2	Ergon COB (23.85×23.85)	/	M3	6.5mm	33.0mm/ 2-@180°
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			
	Ergon COB (23.85×23.85)	BJB Holder 47.319.2141.50			
		Ideal Holder 50-2102CR			
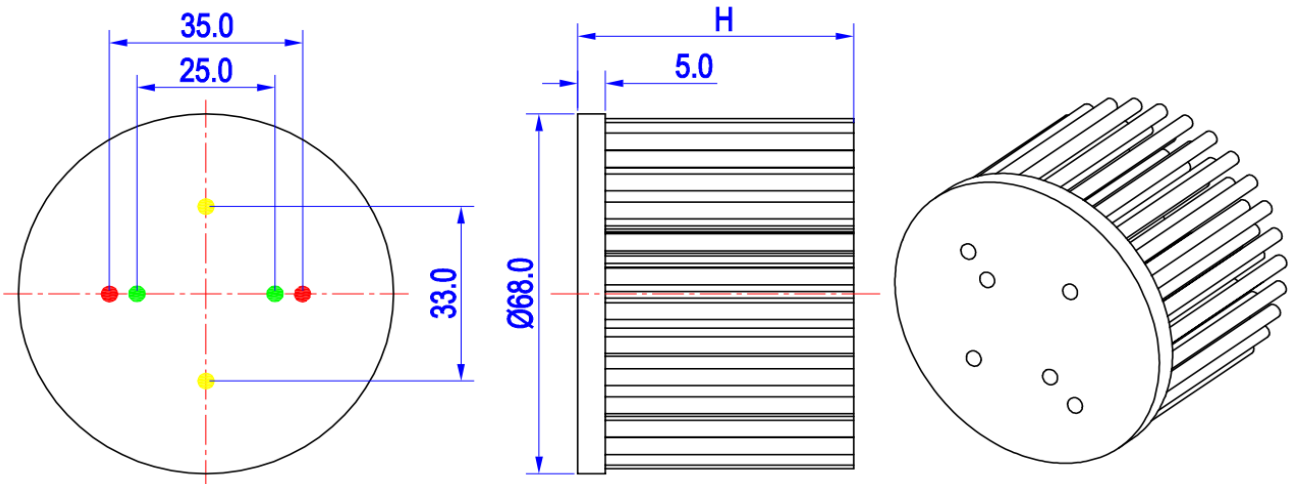
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The product deta table

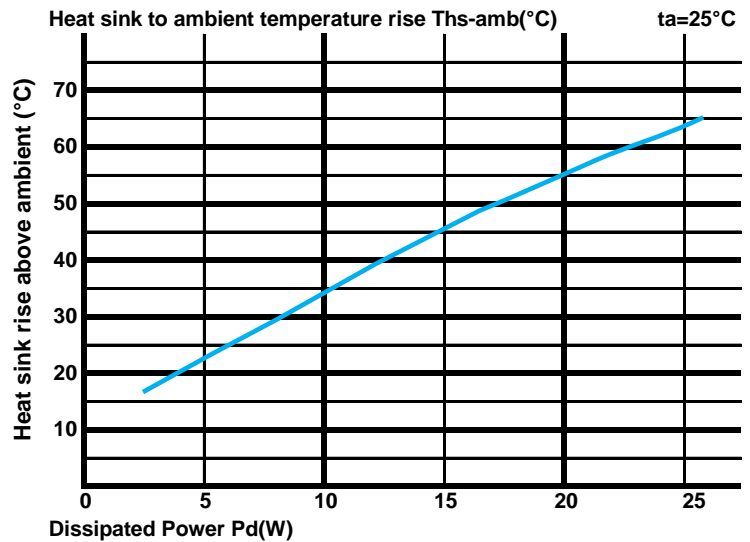| Model No.	GooLED-LUME-6860
Heatsink Size	Φ68xH60mm
Heatsink Material	AL1070
Finish	Black Anodized
Weight (g)	176.0
Dissipated power (Ths-amb,50℃)	17.0 (W)
Cooling surface area (mm²)	70017
Thermal Resistance (Rhs-amb)	2.94 (°C/W)

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;

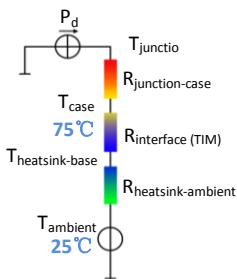| Pd = Pe x (1-ηL)		Heat sink to ambient thermal resistance Rhs-amb (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
		GooLED-LUME-6860	
Dissipated Power Pd(W)	5.0	4.60	23.0
	10.0	3.40	34.0
	15.0	3.00	45.0
	20.0	2.75	55.0
	25.0	1.84	46.0

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:

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

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