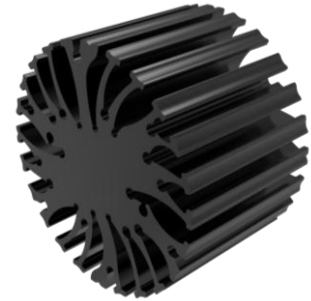


EtraLED

EtraLED-LUME-4880 Lumens Modular Passive Star LED Heat Sink Φ 48mm

Features VS Benefits

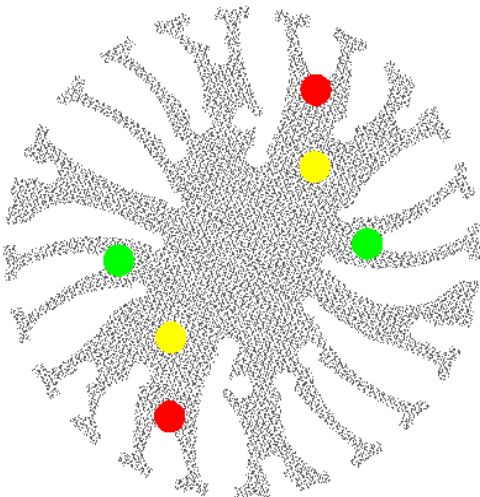
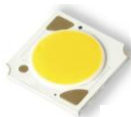
- * The EtraLED-LUME-4880 Lumens Pin Fin LED Heat Sinks are specifically designed for luminaires using the Lumens LED engines.
- * Mechanical compatibility with direct mounting of the LED engines to the LED cooler and thermal performance matching the lumen packages.
- * For spotlight and downlight designs from 700 to 1,800 lumen.
- * Thermal resistance range R_{th} 4.17°C/W.
- * Modular design with mounting holes foreseen for direct mounting of Lumens Ergon COB series, and AC-ALL series LED engines.
- * Diameter 48.0mm - standard height 80.0mm 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 srar 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 srar LED heat sinks.

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 data provided on the manual.

EtraLED

EtraLED-LUME-4880 Lumens Modular Passive Star LED Heat Sink Φ 48mm

Mounting Options and Drawings & Dimensions

Example: EtraLED-LUME-4880-B-1,2

Example: EtraLED-LUME-48 **1** - **2** - **3**

1 Height (mm)

2 Anodising Color

B-Black

C-Clear

Z-Custom

3 Mounting Options - see graphics for details Combinations available

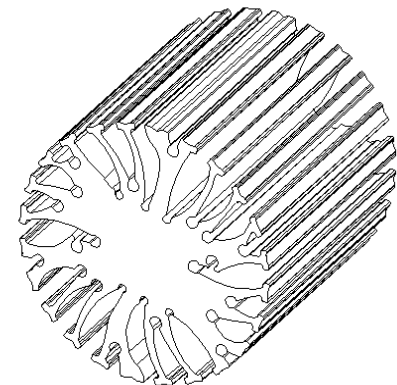
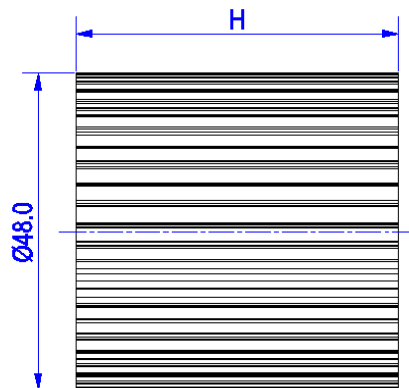
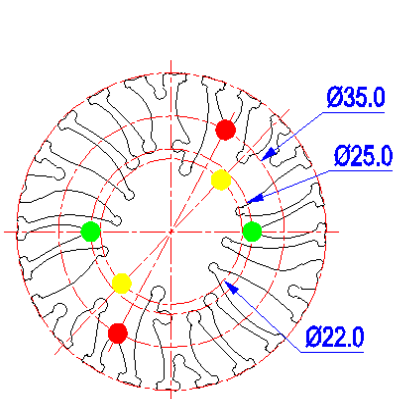
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means option 1 and 2 combined

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			



EtraLED

EtraLED-LUME-4880 Lumens Modular Passive Star LED Heat Sink $\Phi 48\text{mm}$

The product data table

	Model No.	EtraLED-LUME-4880
	Heatsink Size	$\Phi 48 \times H 80\text{mm}$
	Heatsink Material	AL6063-T5
	Finish	Black Anodized
	Weight (g)	213.0
	Dissipated power (T_{hs-amb}, 50°C)	12.0 (W)
	Cooling surface area (mm²)	58826
	Thermal Resistance (R_{hs-amb})	4.17 (°C/W)

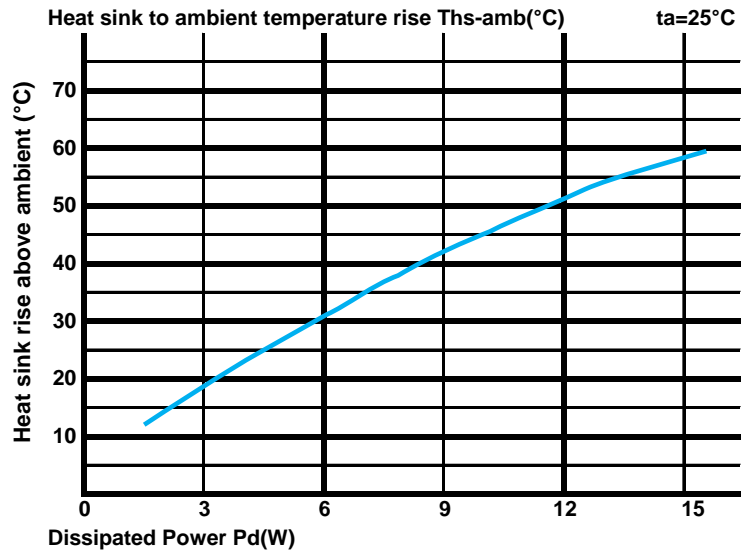
The thermal data table

* 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: $P_d = P_e \times (1 - \eta_L)$.

Pd - Dissipated power ; Pe - Electrical power ; η_L = Light efficiency of the LED module;

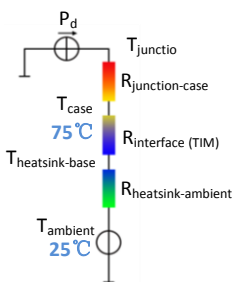
Dissipated Power Pd(W)	Pd = Pe x (1- η_L)	Heat sink to ambient thermal resistance R _{hs-amb} (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
		EtraLED-LUME-4880	
3.0		6.00	18.0
6.0		5.00	30.0
9.0		4.67	42.0
12.0		4.17	50.0
15.0		3.87	58.0



*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: $\theta = (T_{hs} - T_a) / P_d$

θ - Thermal Resistance [°C/W]; T_{hs} - Heatsink temperature ; T_a - 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:

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