

## EtraLED

### EtraLED-LUME-8520 Lumens Modular Passive Star LED Heat Sink $\Phi$ 85mm

#### Features VS Benefits

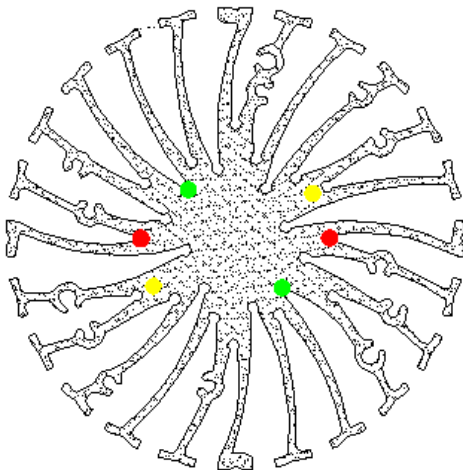
- \* The EtraLED-LUME-8520 Lumens Pin Fin LED Heat Sinks are specifically designed for luminaires using the Lumens LED engines.
- \* Mechanical compatibility with direct mounting of the LED engines to the LED cooler and thermal performance matching the lumen packages.
- \* For spotlight and downlight designs from 1200 to 3,100 lumen.
- \* Thermal resistance range  $R_{th}$  2.38°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of Lumens Ergon COB series, and AC-ALL series LED engines.
- \* Diameter 85.0mm - standard height 20.0mm 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](http://www.lumensleds.com) data provided on the manual.

**EtraLED**

**EtraLED-LUME-8520 Lumens Modular Passive Star LED Heat Sink Ø85mm**

**Mounting Options and Drawings & Dimensions**

Example: EtraLED-LUME-8520-B-1,2

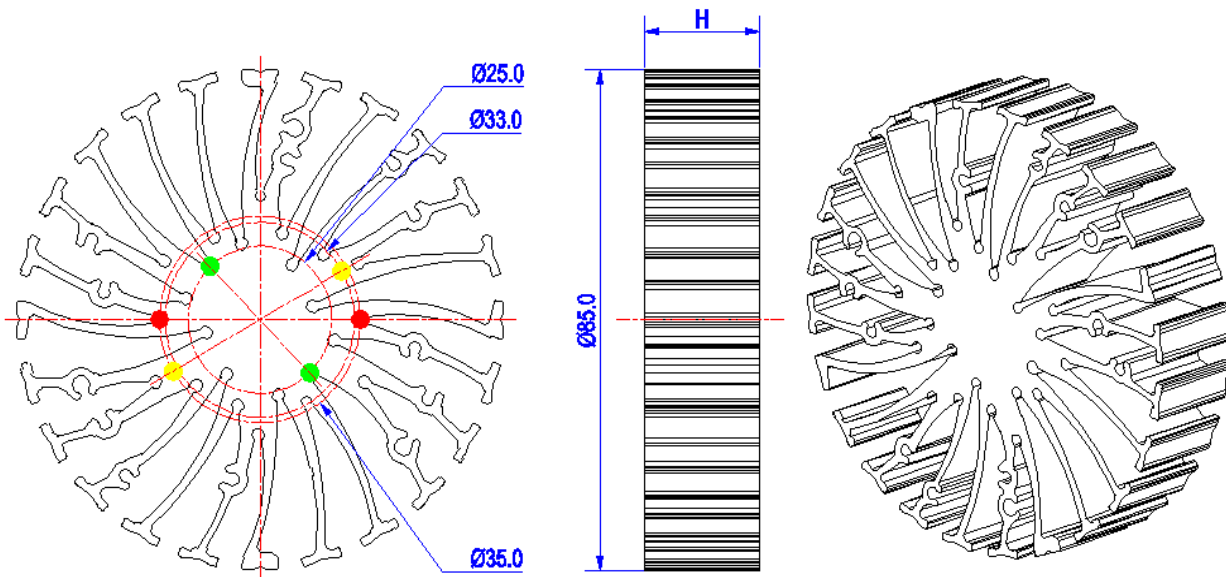
Example: EtraLED-LUME-85 **1** - **2** - **3**

- 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			



## EtraLED

### EtraLED-LUME-8520 Lumens Modular Passive Star LED Heat Sink $\Phi 85\text{mm}$

#### The product data table

	<b>Model No.</b>	EtraLED-LUME-8520
	<b>Heatsink Size</b>	$\Phi 85 \times H20\text{mm}$
	<b>Heatsink Material</b>	AL6063-T5
	<b>Finish</b>	Black Anodized
	<b>Weight (g)</b>	115.0
	<b>Dissipated power (T<sub>hs-amb</sub>, 50°C)</b>	21.0 (W)
	<b>Cooling surface area (mm<sup>2</sup>)</b>	40076
	<b>Thermal Resistance (R<sub>hs-amb</sub>)</b>	2.38 (°C/W)

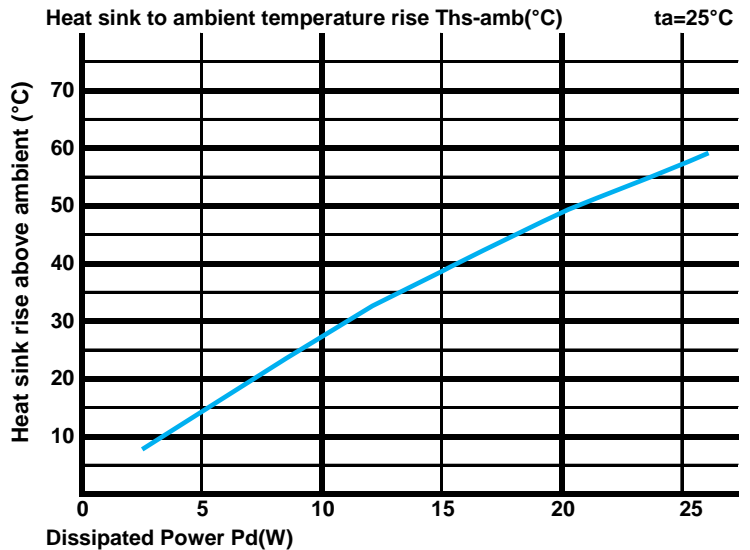
#### The thermal data table

\* 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 ;  $\eta_L$  = Light efficiency of the LED module;

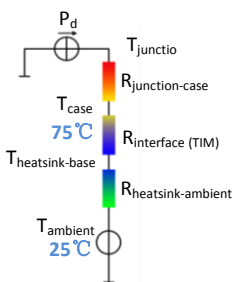
Dissipated Power Pd(W)	Pd = Pe x (1- $\eta_L$ )	Heat sink to ambient thermal resistance R <sub>hs-amb</sub> (°C/W)	Heat sink to ambient temperature rise T <sub>hs-amb</sub> (°C)
		EtraLED-LUME-8520	
5.0		2.80	14.0
10.0		2.70	27.0
15.0		2.53	38.0
20.0		2.40	48.0
25.0		2.28	57.0



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

$\theta$  - Thermal Resistance [°C/W]; T<sub>hs</sub> - Heatsink temperature ; T<sub>a</sub> - 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<sub>junction-case</sub>, the thermal resistance of the TIM outside the package is R<sub>interface (TIM)</sub> [°C/W], the thermal resistance with the heat sink is R<sub>heatsink-ambient</sub> [°C/W], and the ambient temperature is T<sub>ambient</sub> [°C].

\*Thermal resistances outside the package R<sub>interface (TIM)</sub> and R<sub>heatsink-ambient</sub> can be integrated into the thermal resistance R<sub>case-ambient</sub> at this point. Thus, the following formula is also used:

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