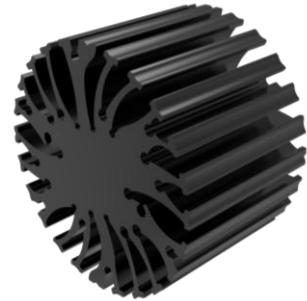


**EtraLED**

**EtraLED-SEO-4850 Seoul Modular Passive Star LED Heat Sink  $\Phi$ 48mm**

**Features VS Benefits**

- \* The EtraLED-SEO-4850 Seoul Passive Star LED Heat Sinks are specifically designed for luminaires using the Seoul 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 400 to 1,500 lumen.
- \* Thermal resistance range  $R_{th}$  5.00°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of Seoul COB series.
- \* Diameter 48.0mm - standard height 50.0mm, Other heights on request.
- \* Forged from highly conductive aluminum.

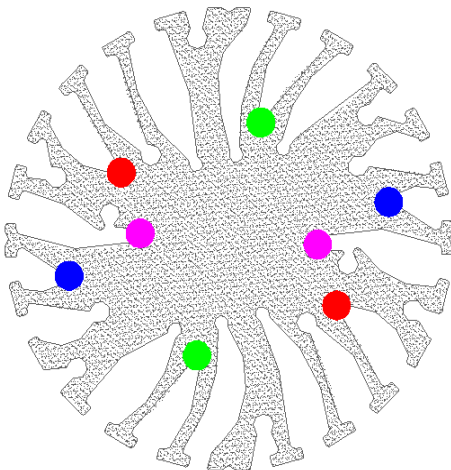


**Zhaga LED engine and radiator assembly is a unified future international standardization**

- \* Below you find an overview of Seoul 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.



SEoul SEMICONDUCTOR



**Seoul LED Modules directly Mounting Options**

**Seoul COB Series, Size 13.5x13.5mm.**

- |            |            |
|------------|------------|
| SAW80661A; | SDW01F1C;  |
| SAW90661A; | SDW81F1B;  |
| SAW810xxx; | SDW81F1C;  |
| SAW910xxx; | SDW81F1DY; |

With the Zhaga Book 11 holders for the green indicator marks.  
BJB holder: 47.319.6294.50; AAG.STUCCHI: 8100-G2  
Without the holders for the pink indicator marks.  
Direct mounting with machine screws M3x6.5mm.

With the LEDiL products:  
Olivia series: FN14637-S  
Ronda series: FN15972-xxx; FN15971-xxx; FN15969-xxx;

**Seoul COB Series, Size 19x19mm.**

- |           |           |
|-----------|-----------|
| SDW02F1C; | SDW82F1C; |
| SDW03F1C; | SDW83F1C; |
| SDW92F1C; |           |

With the Zhaga Book 3 holders for the blue indicator marks.  
BJB holder: 47.319.2021.50; AAG.STUCCHI: 8101-G2  
Without the holders for the red indicator marks.  
Direct mounting with machine screws M3x6.5mm.

With the LEDiL products:  
Olivia series: FN14637-S; FN14828-M;  
Ronda series: FN15xxx-xx;

# EtraLED

## EtraLED-SEO-4850 Seoul Modular Passive Star LED Heat Sink $\Phi$ 48mm

### Mounting Options and Drawings & Dimensions

Example: EtraLED-SEO-4850-B-1,2

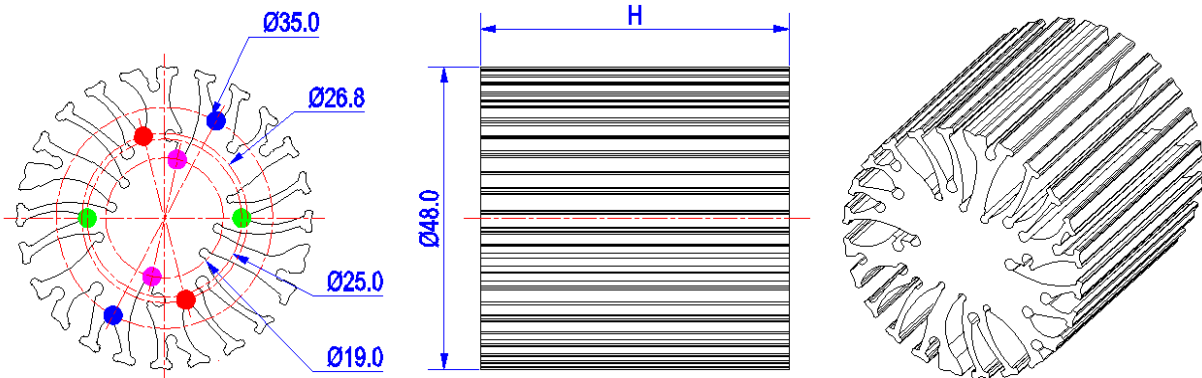
Example: EtraLED-SEO-48 **1** - **2** - **3**

- 1** Height (mm)
- 2** Anodising Color
  - B-Black
  - C-Clear
  - Z-Custom
- 3** Mounting Options - see graphics for details Combinations available
  - 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.	LEDiL products		THREAD	THREAD DEPTH	THREAD HOLE DISTANCE
			Olivia series	Ronda series			
1	COB Size 13.5x13.5mm	/	FN14637-S;	FN15972-xxx; FN15971-xxx; FN15969-xxx;	M3	6.5mm	19.0mm/ 2-@180°
2		BJB Holder 47.319.2021.50 AAG.STUCCHI 8101-G2			M3	6.5mm	25.0mm/ 2-@180° (Zhaga book 11)
3	COB Size 19x19mm	/	FN14637-S; FN14828-M;	FN15xxx-xx;	M3	6.5mm	26.8mm/ 2-@180°
4		BJB Holder 47.319.2021.50 AAG.STUCCHI 8101-G2			M3	6.5mm	35.0mm/ 2-@180° (Zhaga book 3)



**EtraLED**

**EtraLED-SEO-4850 Seoul Modular Passive Star LED Heat Sink Φ48mm**

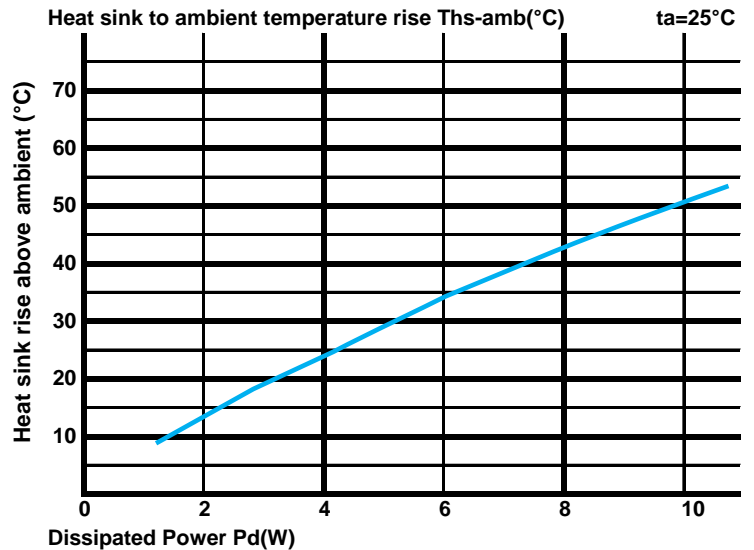
**The product data table**

	<b>Model No.</b>	EtraLED-SEO-4850
	<b>Heatsink Size</b>	Φ48xH50mm
	<b>Heatsink Material</b>	AL6063-T5
	<b>Finish</b>	Black Anodized
	<b>Weight (g)</b>	134.0
	<b>Dissipated power (T<sub>hs-amb</sub>,50°C)</b>	10.0 (W)
	<b>Cooling surface area (mm<sup>2</sup>)</b>	36868
	<b>Thermal Resistance (R<sub>hs-amb</sub>)</b>	5.0 (°C/W)

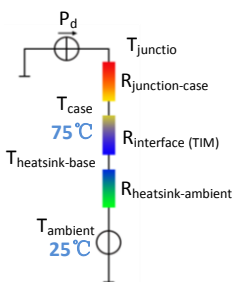
**The thermal data table**

\* 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)	Pd = Pe x (1-ηL)	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-SEO-4850	
2.0		6.50	13.0
4.0		6.00	24.0
6.0		5.67	34.0
8.0		5.38	43.0
10.0		5.00	50.0



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