

## EtraLED

### EtraLED-SEO-11050 Seoul Modular Passive Star LED Heat Sink $\Phi$ 110mm

#### Features VS Benefits

- \* The EtraLED-SEO-11050 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 2400 to 6,100 lumen.
- \* Thermal resistance range  $R_{th}$  1.22°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of Seoul COB series.
- \* Diameter 110.0mm - standard height 50.0mm, Other heights on request.
- \* Forged from highly conductive aluminum.

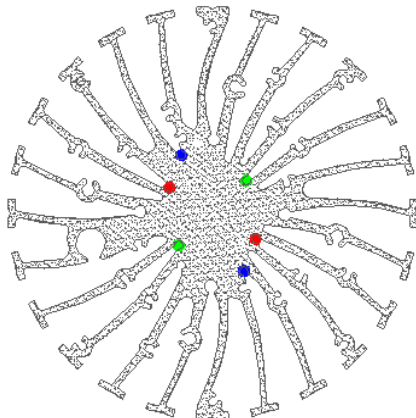


#### Zhaga LED engine and radiator assembly is a unified future international standardization

- \* 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.



SEOL 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;

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**EtraLED-SEO-11050 Seoul Modular Passive Star LED Heat Sink  $\Phi$ 110mm**

**Mounting Options and Drawings & Dimensions**

Example: EtraLED-SEO-11050-B-1,2

Example: EtraLED-SEO-110 **1** - **2** - **3**

**1** Height (mm)

**2** Anodising Color

B-Black

C-Clear

Z-Custom

**3** Mounting Options - see graphics for details Combinations available

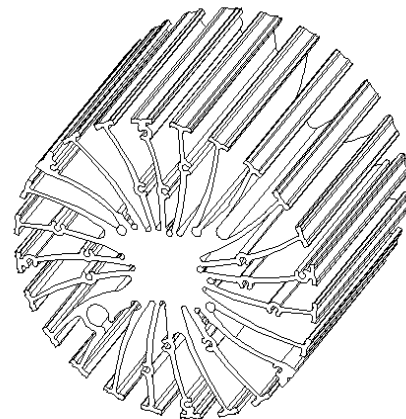
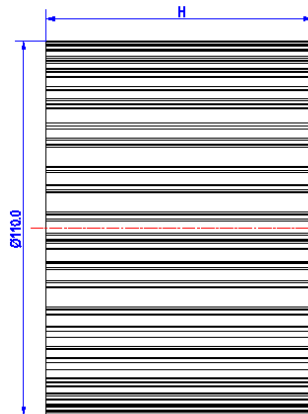
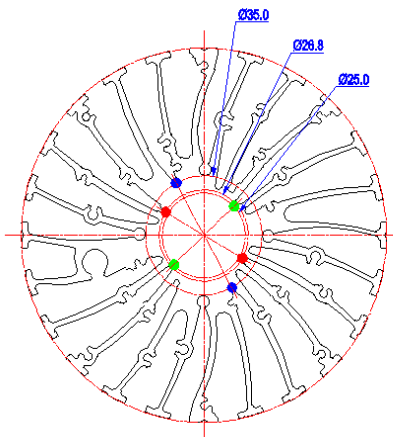
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means option 1 and 2 combined

**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.	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)



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**EtraLED-SEO-11050 Seoul Modular Passive Star LED Heat Sink Φ110mm**

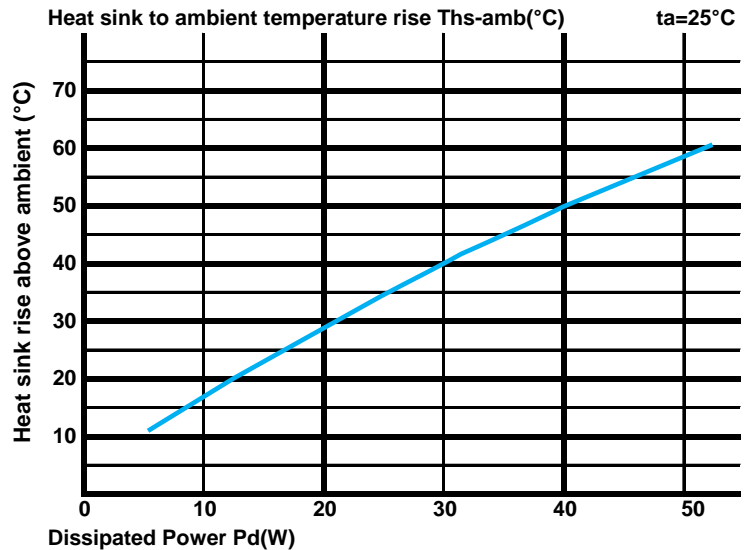
**The product data table**

	<b>Model No.</b>	EtraLED-SEO-11050
	<b>Heatsink Size</b>	Φ110xH50mm
	<b>Heatsink Material</b>	AL6063-T5
	<b>Finish</b>	Black Anodized
	<b>Weight (g)</b>	414.0
	<b>Dissipated power (T<sub>hs-amb</sub>,50°C)</b>	41.0 (W)
	<b>Cooling surface area (mm<sup>2</sup>)</b>	124084
	<b>Thermal Resistance (R<sub>hs-amb</sub>)</b>	1.22 (°C/W)

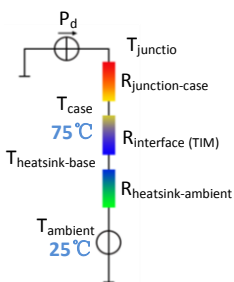
**The thermal data table**

\* 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 Ths-amb (°C)
		EtraLED-SEO-11050	
10.0		1.60	16.0
20.0		1.40	28.0
30.0		1.33	40.0
40.0		1.23	49.0
50.0		1.16	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:  $\theta = (T_{hs} - T_a) / P_d$   
 $\theta$  - 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:  
 $T_{junction} = (R_{junction-case} + R_{case-ambient}) \cdot P_d + T_{ambient}$