



for

LED



xLED

**xLED-SEO-4550 Pin Fin Heat Sink  $\Phi$ 45mm for Seoul**

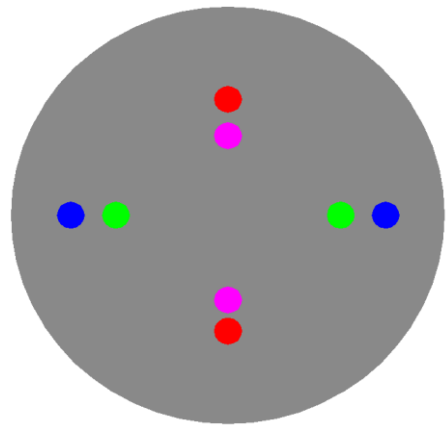
**Features VS Benefits**

- \* The xLED-SEO-4550 Seoul Pin Fin 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 Rth 5.55°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of Seoul COB series.
- \* Diameter 45.0mm - 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 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.



**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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## Mounting Options and Drawings & Dimensions

Example: xLED-SEO-4550-B-1,2

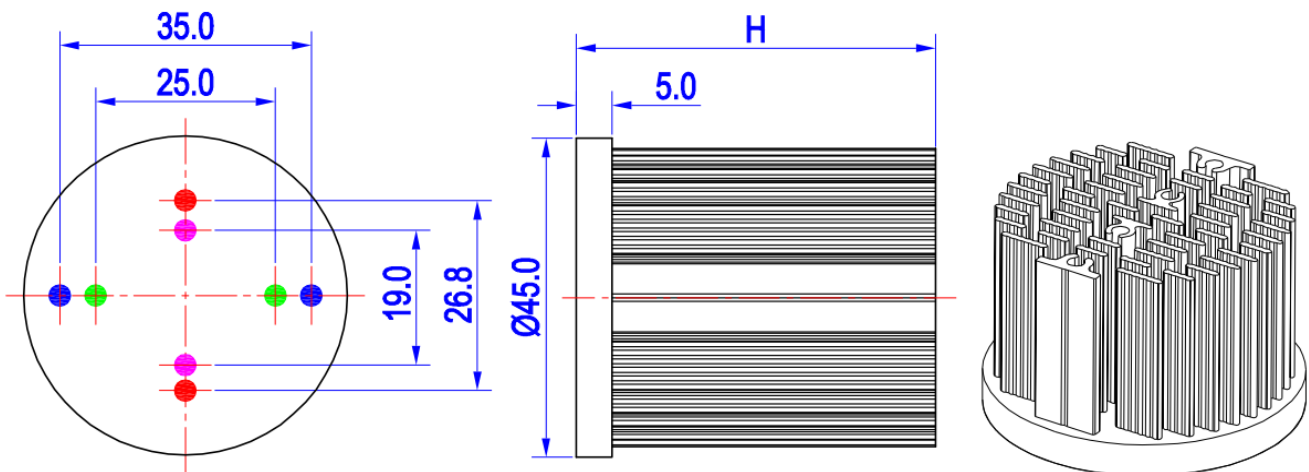
Example: xLED-SEO-45 **1** - **2** - **3**

- 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)



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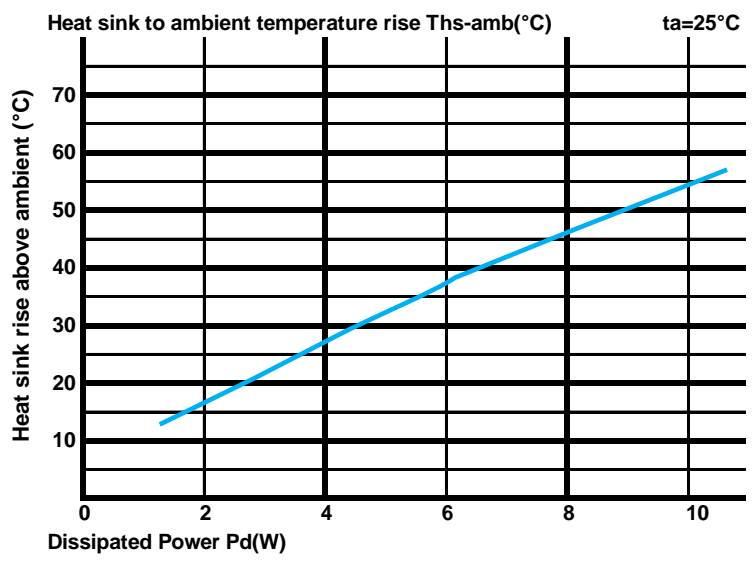
The product data table

	Model No.	xLED-SEO-4550
	Heatsink Size	$\Phi$ 45xH50mm
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	63.5
	Dissipated power (Ths-amb,50°C)	9.0 (W)
	Cooling surface area (mm <sup>2</sup> )	37985
	Thermal Resistance (Rhs-amb)	5.55 (°C/W)

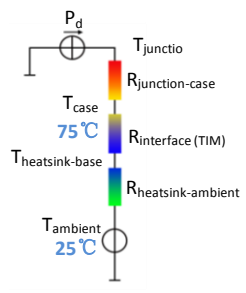
The thermal data table

\* 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 Rhs-amb (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
	xLED-SEO-4550	
2.0	8.00	16.0
4.0	6.50	26.0
6.0	6.17	37.0
8.0	5.75	46.0
10.0	5.40	54.0



\*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:  $\theta = (Ths - Ta) / Pd$   
 $\theta$  - Thermal Resistance [°C/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  $R_{interface (TIM)}$  [°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:  
 $T_{junction} = (R_{junction-case} + R_{case-ambient}) \cdot Pd + T_{ambient}$