



LED

xLED

xLED-VOS-4550 Pin Fin LED Heat Sink Φ 45mm for Vossloh-Schwabe

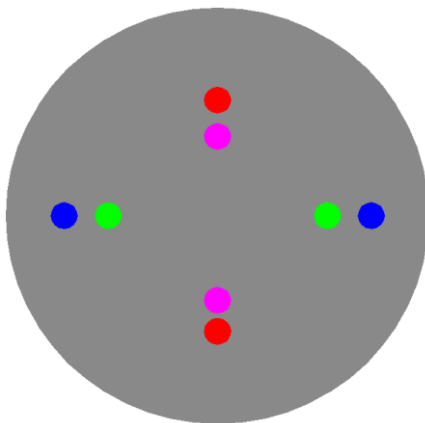
Features VS Benefits

- * The xLED-VOS-4550 Vossloh-Schwabe Pin Fin LED Heat Sinks are specifically designed for luminaires using the Vossloh-Schwabe 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 Vossloh-Schwabe 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 Vossloh-Schwabe 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.



Vossloh-Schwabe LED Modules directly Mounting Options

Vossloh-Schwabe LUGA Shop Gen. 5/ Gen.6 COB Series (13.5*13.5) :

- DMS124***H;
- DMS123***G;

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.

Vossloh-Schwabe LUGA Shop Gen. 5/ Gen.6 COB Series (19.0*19.0):

- DMS124***G; DMS125***H;
- DMS125***G; DMS126***H;
- DMS126***G; DMS128***H;
- DMS128***G;

Vossloh-Schwabe LUGA Shop TW COB Series:

TW1914;
 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.



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Mounting Options and Drawings & Dimensions

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

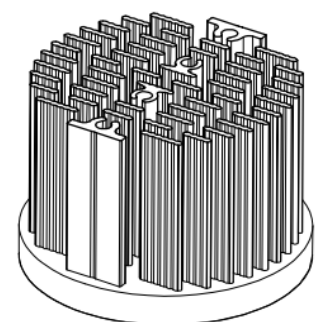
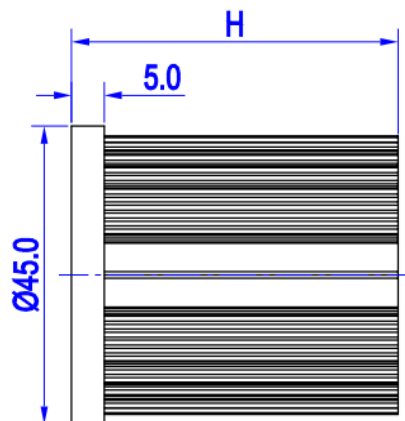
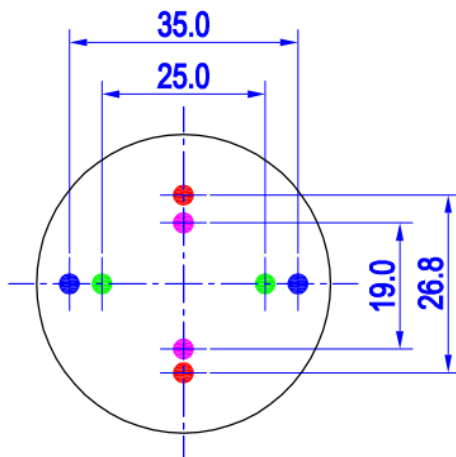
Example: xLED-VOS-45 **1** - **2** - **3**

- 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.	THREAD	THREAD DEPTH	THREAD HOLE DISTANCE
1	COB series (13.5*13.5)	/	M3	6.5mm	19.0mm/ 2-@180°
2		BJB Holder 47.319.6294.50 AAG.STUCCHI 8100-G2	M3	6.5mm	25.0mm/ 2-@180° (Zhaga book 11)
3	COB series (19.0*19.0)	/	M3	6.5mm	26.8mm/ 2-@180°
4		BJB Holder 47.319.2021.50 AAG.STUCCHI 8101-G2			35.0mm/ 2-@180° (Zhaga book 3)



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xLED-VOS-4550 Pin Fin LED Heat Sink $\Phi 45\text{mm}$ for Vossloh-Schwabe

The product data table

	Model No.	xLED-VOS-4550
	Heatsink Size	$\Phi 45 \times H 50\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	63.5
	Dissipated power (Ths-amb,50°C)	9.0 (W)
	Cooling surface area (mm²)	37985
	Thermal Resistance (Rhs-amb)	5.55 (°C/W)

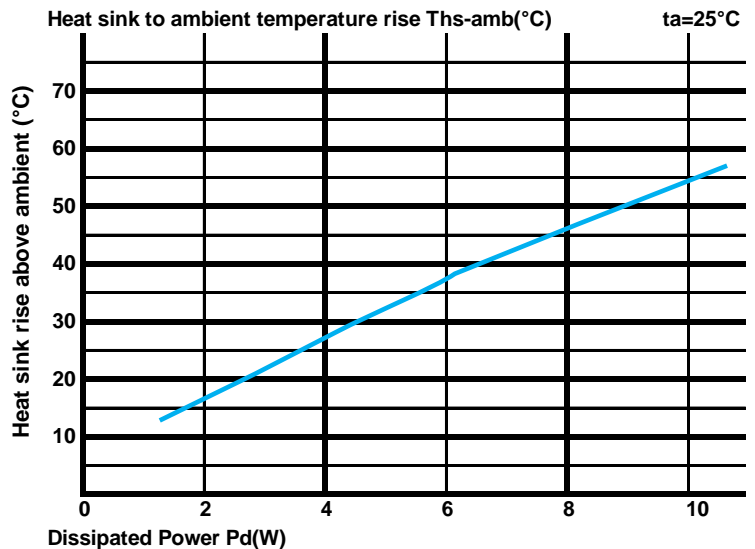
The thermal data table

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

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

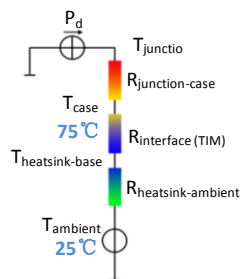
Dissipated Power Pd(W)	Pd = Pe x (1- η_L)	Heat sink to ambient thermal resistance Rhs-amb (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
		xLED-VOS-4550	
2.0		8.00	16.0
4.0		6.50	26.0
6.0		6.17	37.0
8.0		5.75	46.0
10.0		5.40	54.0



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

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 $R_{\text{junction-case}}$, the thermal resistance of the TIM outside the package is $R_{\text{interface (TIM)}}$ [°C/W], the thermal resistance with the heat sink is $R_{\text{heatsink-ambient}}$ [°C/W], and the ambient temperature is T_{ambient} [°C].

*Thermal resistances outside the package $R_{\text{interface (TIM)}}$ and $R_{\text{heatsink-ambient}}$ can be integrated into the thermal resistance $R_{\text{case-ambient}}$ at this point. Thus, the following formula is also used:

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