



for

LED



*GooLED*

**GooLED-VOS-6860 Pin Fin LED Heat Sink  $\Phi$ 68mm for Vossloh-Schwabe**

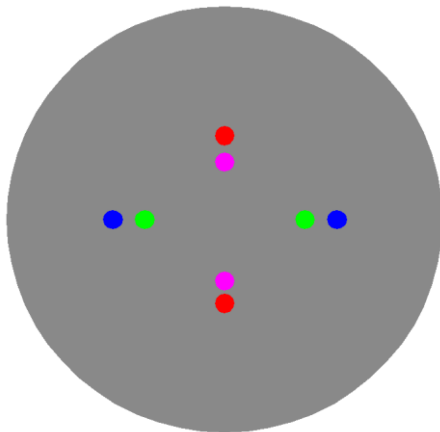
**Features VS Benefits**

- \* The GooLED-VOS-6860 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 1,000 to 2,800 lumen.
- \* Thermal resistance range Rth 2.94°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of Vossloh-Schwabe COB series.
- \* Diameter 68.0mm - standard height 60.0mm 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.



**Mounting Options and Drawings & Dimensions**

Example:GooLED-VOS-6860-B-1,2

Example:GooLED-VOS-68 **1** - **2** - **3**

**1** Height (mm)

**2** Anodising Color

B-Black

C-Clear

Z-Custom

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

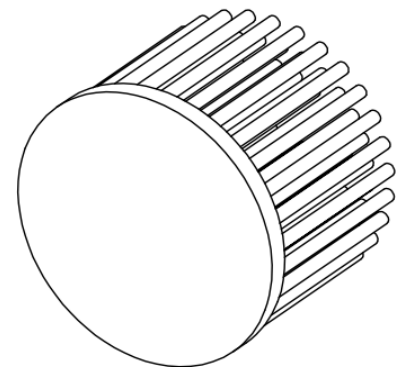
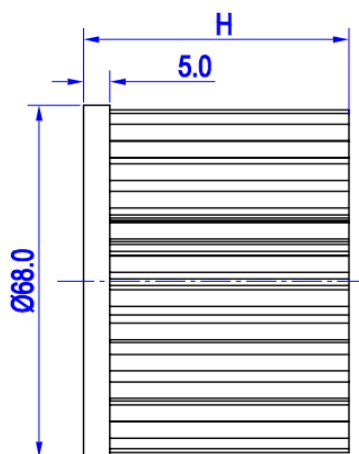
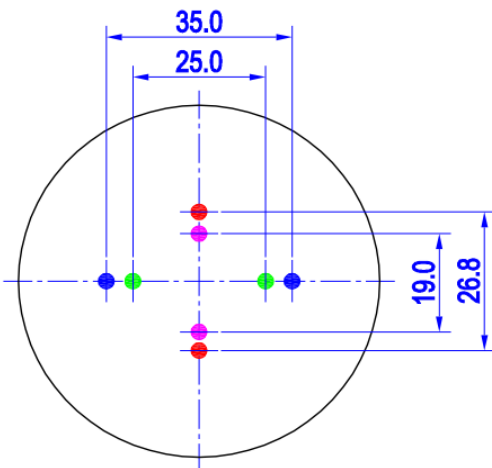
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means option 1 and 2 combined

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



## GooLED

### GooLED-VOS-6860 Pin Fin LED Heat Sink $\Phi 68\text{mm}$ for Vossloh-Schwabe

#### The product data table

	Model No.	GooLED-VOS-6860
	Heatsink Size	$\Phi 68 \times H 60\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	176.0
	Dissipated power (T <sub>hs-amb</sub> , 50°C)	17.0 (W)
	Cooling surface area (mm <sup>2</sup> )	70017
	Thermal Resistance (R <sub>hs-amb</sub> )	2.94 (°C/W)

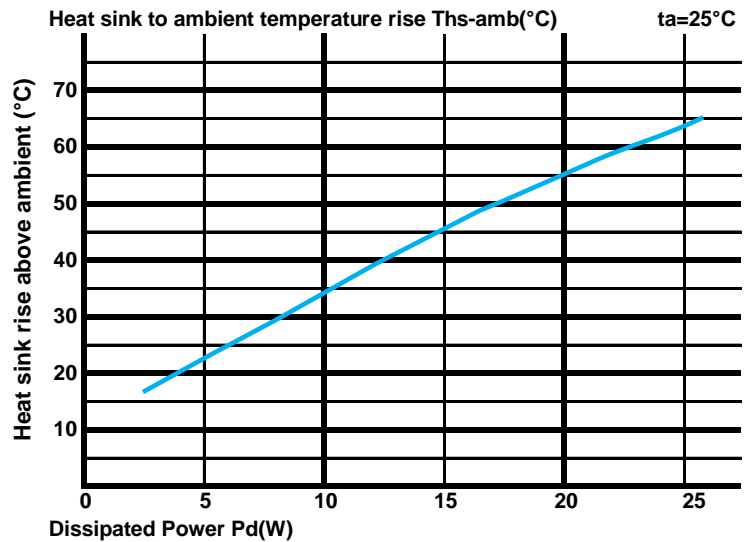
#### The thermal data table

\* 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;

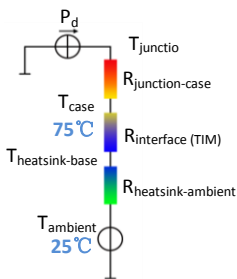
Dissipated Power Pd(W)	Pd = Pe x (1- $\eta_L$ )	Heat sink to ambient thermal resistance R <sub>hs-amb</sub> (°C/W)	Heat sink to ambient temperature rise T <sub>hs-amb</sub> (°C)
		GooLED-VOS-6860	
5.0		4.60	23.0
10.0		3.40	34.0
15.0		3.00	45.0
20.0		2.75	55.0
25.0		1.84	46.0



\*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:

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