GooLED

### GooLED-VOS-8650 Pin Fin LED Heat Sink Φ86.5mm for Vossloh-Schwabe

Features VS Benefits

* The GooLED-VOS-8650 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 1,600 to 4,400 lumen.
* Thermal resistance range Rth 1.85°C/W.
* Modular design with mounting holes foreseen for direct mounting of Vossloh-Schwabe COB series.
* Diameter 86.5mm - 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.
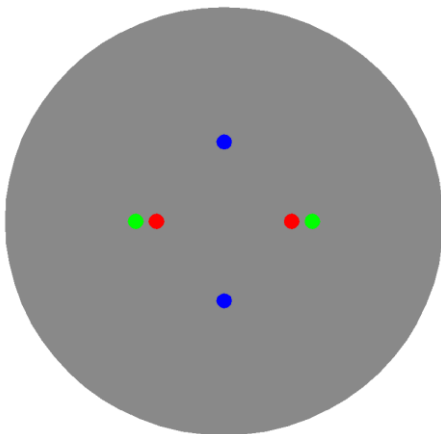
Vossloh-Schwabe LED Modules directly Mounting Options

Vossloh-Schwabe LUGA Shop Gen. 5/ Gen.6 COB Series (28.0*28.0):

DMS120***G;	DMS120***H;
DMS12C***G;	DMS12C***H;
DMS18C***G;	DMS18B***H;
DMS18Q***G;	

Vossloh-Schwabe LUGA Shop TW COB Series:

TW2817;
TW2820;
With the Zhaga Book 3 holders for the green indicator marks.
BJB holder: 47.319.2030.50;
AAG.STUCCHI: 8102-G2
Without the holders for the blue 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;	

With the Zhaga Book 3 holders for the green 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:GooLED-VOS-8650-B-1,2

Example:GooLED-VOS-86 `1` - `2` - `3`

`1` **Height (mm)**

`2` **Anodising Color**

　　B-Black

　　C-Clear

　　Z-Custom

`3` **Mounting Options - see graphics for details Combinations available**
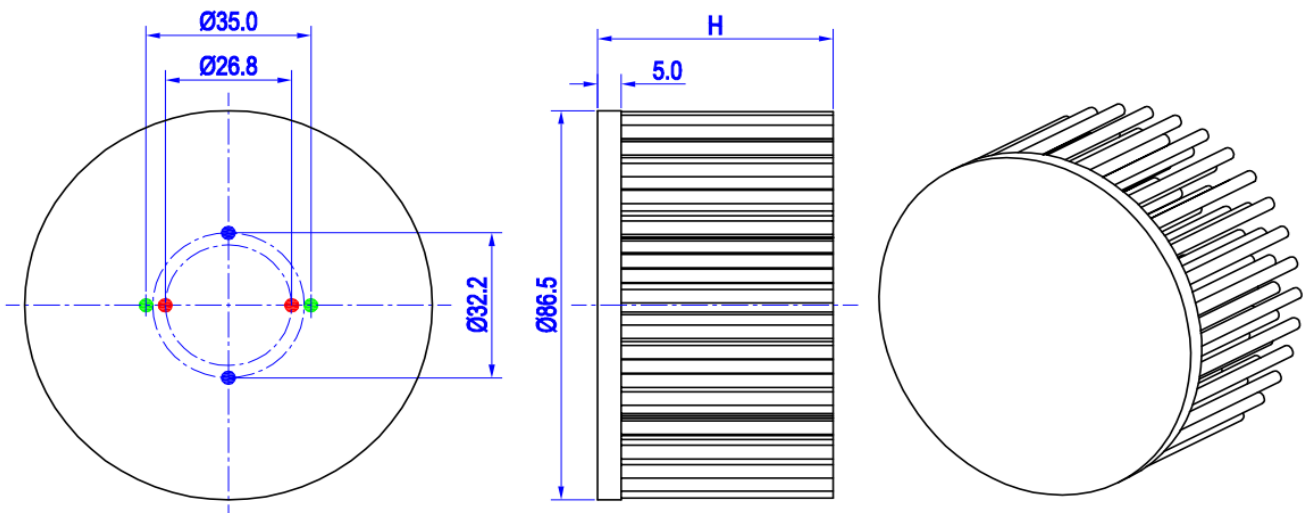
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means option 1 and 2 combined

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 (19.0*19.0)	/	M3	6.5mm	26.8mm/ 2-@180°
2	COB series (28.0*28.0)	/	M3	6.5mm	32.2mm/ 2-@180°
3	COB series (28.0*28.0)	BJB Holder 47.319.2030.50	M3	6.5mm	35.0mm/ 2-@180° (Zhaga book 3)
		AAG.STUCCHI 8102-G2			
	COB series (19.0*19.0)	BJB Holder 47.319.2021.50			
		AAG.STUCCHI 8101-G2			

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The product deta table

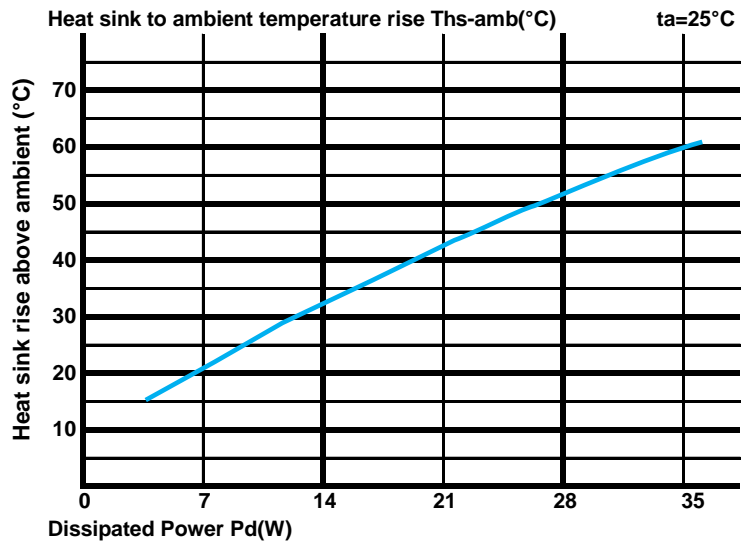| Model No.	GooLED-VOS-8650
Heatsink Size	Φ86.5xH50mm
Heatsink Material	AL1070
Finish	Black Anodized
Weight (g)	210.0
Dissipated power (Ths-amb,50℃)	27.0 (W)
Cooling surface area (mm²)	77577
Thermal Resistance (Rhs-amb)	1.85 (°C/W)

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).

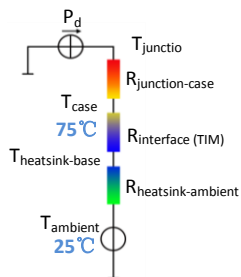   Pd - Dissipated power ; Pe - Electrical power ; ηL = Light effciency of the LED module;

Pd = Pe x (1-ηL)		Heat sink to ambient thermal resistance Rhs-amb (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
		GooLED-VOS-8650	
Dissipated Power Pd(W)	7.0	2.86	20.0
	14.0	2.21	31.0
	21.0	2.00	42.0
	28.0	1.82	51.0
	35.0	1.69	59.0

Heat sink to ambient temperature rise Ths-amb(°C)　　　　**ta=25°C**

(Chart: Heat sink rise above ambient (°C) vs Dissipated Power Pd(W))

*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.

P_d
$T_{junctio}$
$R_{junction-case}$
T_{case}
75℃
$R_{interface (TIM)}$
$T_{heatsink-base}$
$R_{heatsink-ambient}$
$T_{ambient}$
25℃

*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: $\theta = (Ths - Ta)/Pd$

   θ - 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:

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

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