

## GooLED

### GooLED-SAM-8665 Pin Fin LED Heat Sink $\Phi$ 86.5mm for Samsung

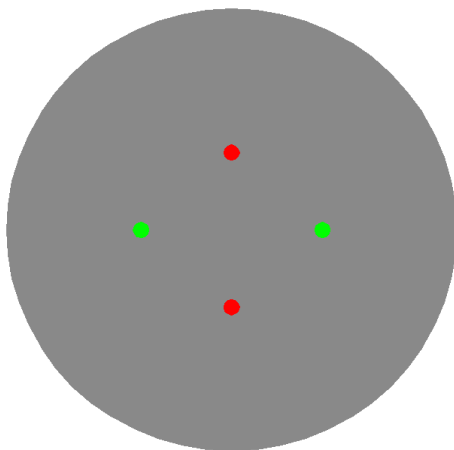
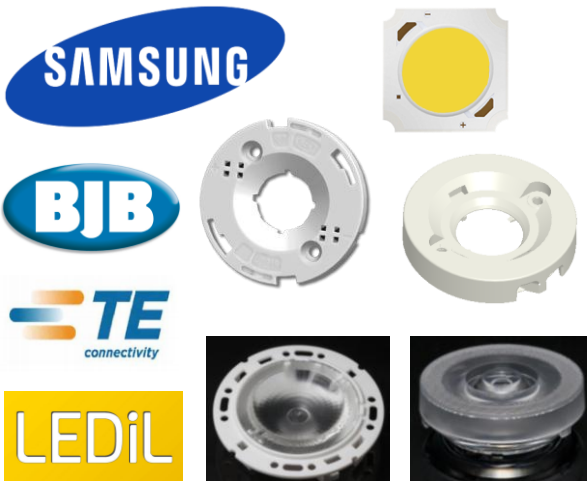
#### Features VS Benefits

- \* The GooLED-SAM-8665 Samsung Pin Fin LED Heat Sinks are specifically designed for luminaires using the Samsung 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 1,800 to 5,200 lumen.
- \* Thermal resistance range  $R_{th}$  1.56°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of Samsung LED engines.
- \* Diameter 86.5mm - standard height 65.0mm, 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 Samsung 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.



#### Samsung LED Modules directly Mounting Options

Samsung B Series LED modules name:

L026B;  
L033B;  
L040B;

With the Zhaga Book 3 holders for the green indicator marks.  
BJB Holder: 47.319.2254.50;  
TE LED Holder: 2213258-1;  
Without the holders for the red indicator marks.  
Direct mounting with machine screws M3x6.5mm.

Samsung D Series LED modules name:

LC016D;  
LC019D;  
LC026D;

With the Zhaga Book 3 holders for the green indicator marks.  
BJB Holder: 47.319.2021.50;  
TE LED Holder: 2213254-1;  
Direct mounting with machine screws M3x6.5mm.

With the LEDiL products:

Ronda series: FN15xxx;  
Olivia series: FN14828-M; FN14637-S;

Samsung C Series LED modules name:

LC040C;

With the Zhaga Book 3 holders for the green indicator marks.  
TE LED Holder: 2213382-1;  
Direct mounting with machine screws M3x6.5mm.

With the LEDiL products:

Ronda series: FN15xxx;



for

LED



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Mounting Options and Drawings & Dimensions

Example:GooLED-SAM-8665-B-1,2

Example:GooLED-SAM-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

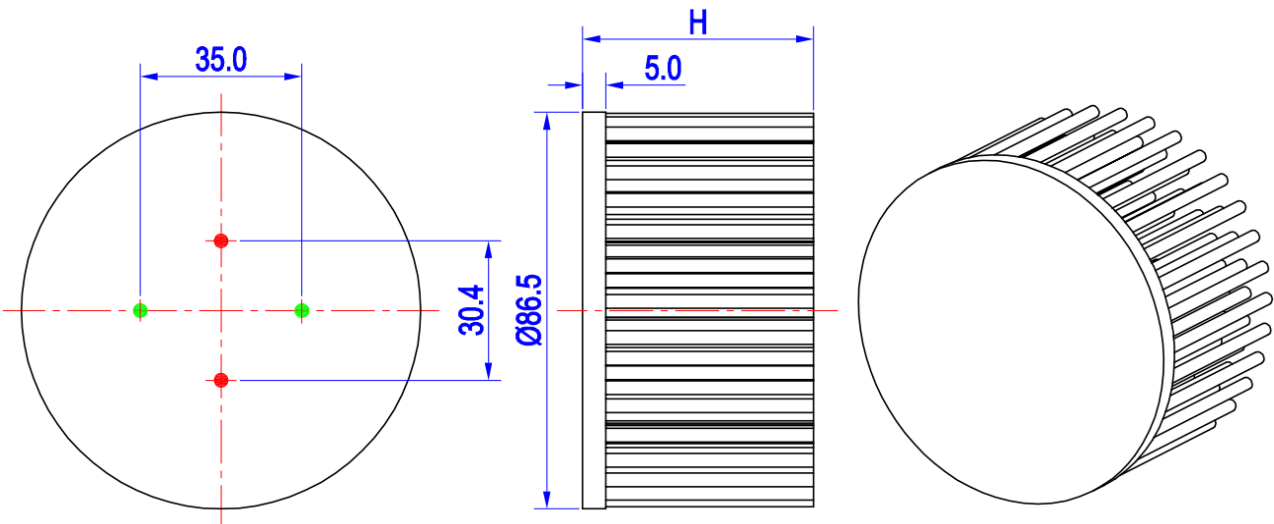
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means option 1 and 2 combined

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.	LEDiL products		THREAD	THREAD DEPTH	THREAD HOLE DISTANCE
			Olivia series	Ronda series			
N	/	None	None	None	None	None	None
1		/			M3	6.5mm	30.4mm/ 2-@180°
2	L026B; L033B; L040B;	BJB Holder 47.319.2254.50	/	/	M3	6.5mm	35.0mm/ 2-@180° (Zhaga book 3)
		TE Holder 2213258-1					
	L016D; L018D; L026D;	BJB Holder 47.319.2021.50	FN14828-M; FN14637-S;				
	L040C;	TE Holder 2213382-1	/	FN15xxx;			



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### GooLED-SAM-8665 Pin Fin LED Heat Sink $\Phi 86.5\text{mm}$ for Samsung

#### The product data table

	Model No.	GooLED-SAM-8665
	Heatsink Size	$\Phi 86.5 \times H 65\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	293.0
	Dissipated power ( $T_{hs-amb, 50^\circ\text{C}}$ )	32.0 (W)
	Cooling surface area ( $\text{mm}^2$ )	95583
	Thermal Resistance ( $R_{hs-amb}$ )	1.56 ( $^\circ\text{C}/\text{W}$ )

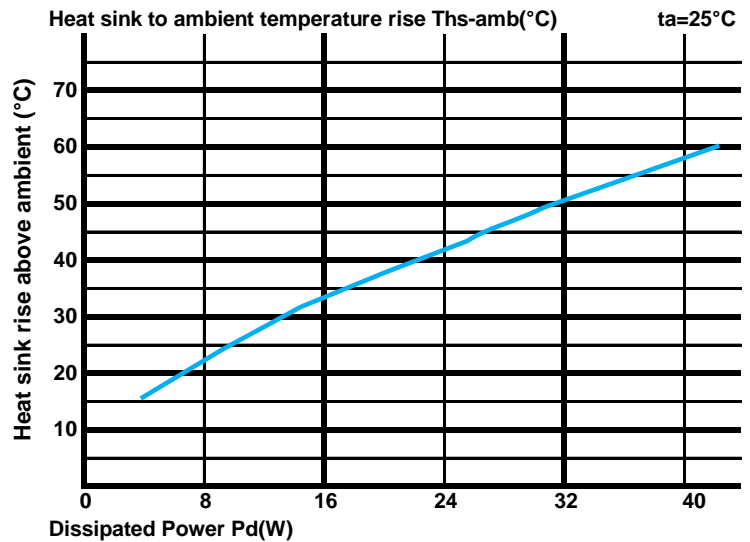
#### The thermal data table

\* Please be aware the dissipated power  $P_d$  is not the same as the electrical power  $P_e$  of a LED module.

\* To calculate the dissipated power please use the following formula:  $P_d = P_e \times (1 - \eta_L)$ .

$P_d$  - Dissipated power ;  $P_e$  - Electrical power ;  $\eta_L$  = Light efficiency of the LED module;

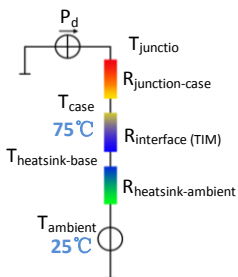
Dissipated Power $P_d$ (W)	$P_d = P_e \times (1 - \eta_L)$	Heat sink to ambient thermal resistance $R_{hs-amb}$ ( $^\circ\text{C}/\text{W}$ )	Heat sink to ambient temperature rise $T_{hs-amb}$ ( $^\circ\text{C}$ )
		GooLED-SAM-8665	
8.0		2.75	22.0
16.0		2.13	34.0
24.0		1.75	42.0
32.0		1.56	50.0
40.0		1.45	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 [ $^\circ\text{C}/\text{W}$ ];  $T_{hs}$  - 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  $R_{interface (TIM)}$  [ $^\circ\text{C}/\text{W}$ ], the thermal resistance with the heat sink is  $R_{heatsink-ambient}$  [ $^\circ\text{C}/\text{W}$ ], and the ambient temperature is  $T_{ambient}$  [ $^\circ\text{C}$ ].

\*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:

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