

**GooLED**

**GooLED-SAM-8650 Pin Fin LED Heat Sink  $\Phi$ 86.5mm for Samsung**

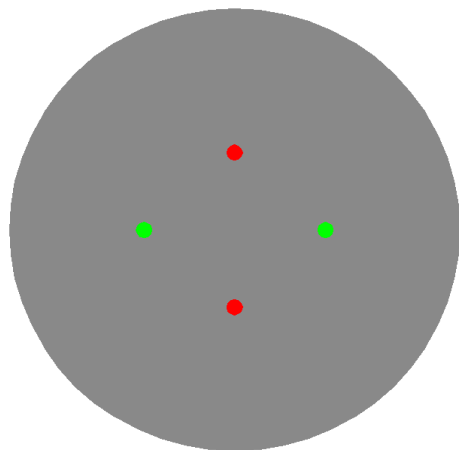
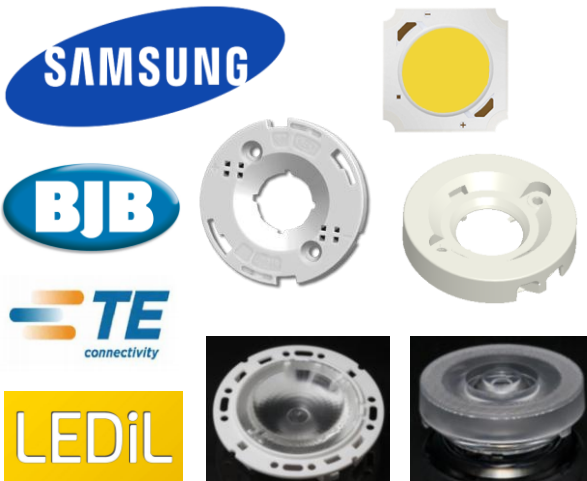
**Features VS Benefits**

- \* The GooLED-SAM-8650 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 1,600 to 4,400 lumen.
- \* Thermal resistance range Rth 1.85°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of Samsung LED engines.
- \* 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 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;

*GooLED*

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### Mounting Options and Drawings & Dimensions

Example:GooLED-SAM-8650-B-1,2

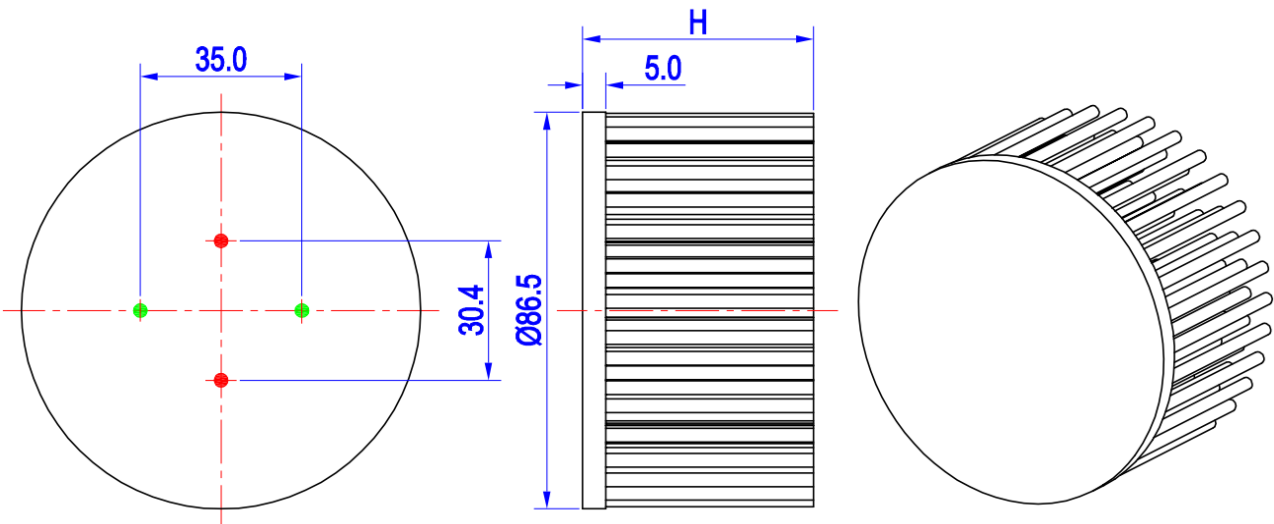
Example:GooLED-SAM-86 1 - 2 - 3

- 1 Height (mm)
- 2 Anodising Color
  - B-Black
  - C-Clear
  - Z-Custom
- 3 Mounting Options - see graphics for details Combinations available  
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			
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;			



## GooLED

### GooLED-SAM-8650 Pin Fin LED Heat Sink $\Phi 86.5\text{mm}$ for Samsung

#### The product data table

	Model No.	GooLED-SAM-8650
	Heatsink Size	$\Phi 86.5 \times H50\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	210.0
	Dissipated power (T <sub>hs-amb</sub> ,50°C)	27.0 (W)
	Cooling surface area (mm <sup>2</sup> )	77577
	Thermal Resistance (R <sub>hs-amb</sub> )	1.85 (°C/W)

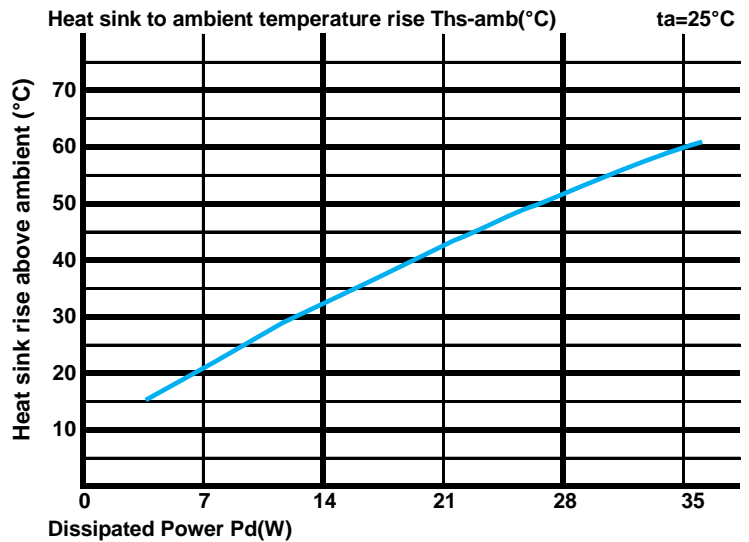
#### The thermal data table

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

Pd - Dissipated power ; Pe - Electrical power ;  $\eta_L$  = Light efficiency of the LED module;

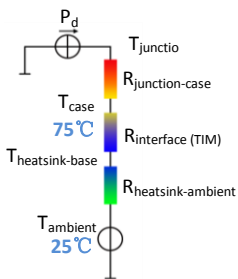
Dissipated Power Pd(W)	Pd = Pe x (1- $\eta_L$ )	Heat sink to ambient thermal resistance R <sub>hs-amb</sub> (°C/W)	Heat sink to ambient temperature rise T <sub>hs-amb</sub> (°C)
		GooLED-SAM-8650	
7.0		2.86	20.0
14.0		2.21	31.0
21.0		2.00	42.0
28.0		1.82	51.0
35.0		1.69	59.0



\*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:

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