



# LED

*GooLED*

## GooLED-SAM-7830 Pin Fin LED Heat Sink $\Phi$ 78mm for Samsung

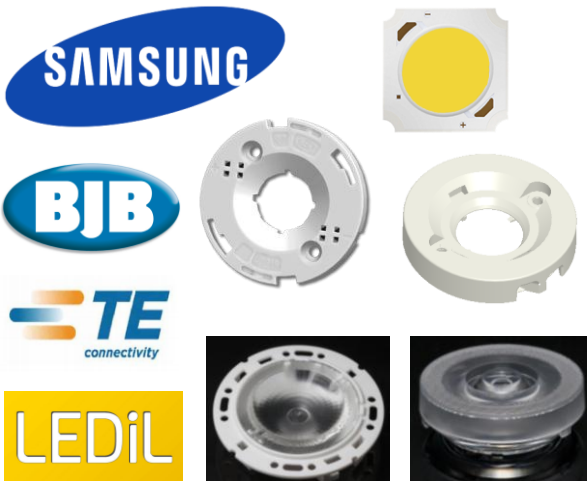
### Features VS Benefits

- \* The GooLED-SAM-7830 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 1,000 to 2,700 lumen.
- \* Thermal resistance range  $R_{th}$  3.03°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of Samsung LED engines.
- \* Diameter 78.0mm - standard height 30.0mm, 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:

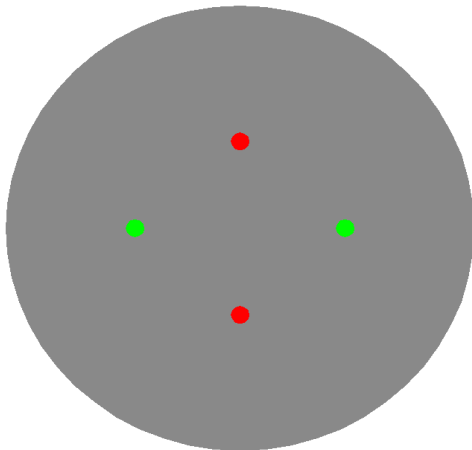
- LC016D;
- LC019D;
- LC026D;

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;



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**Mounting Options and Drawings & Dimensions**

Example:GooLED-SAM-7830-B-1,2

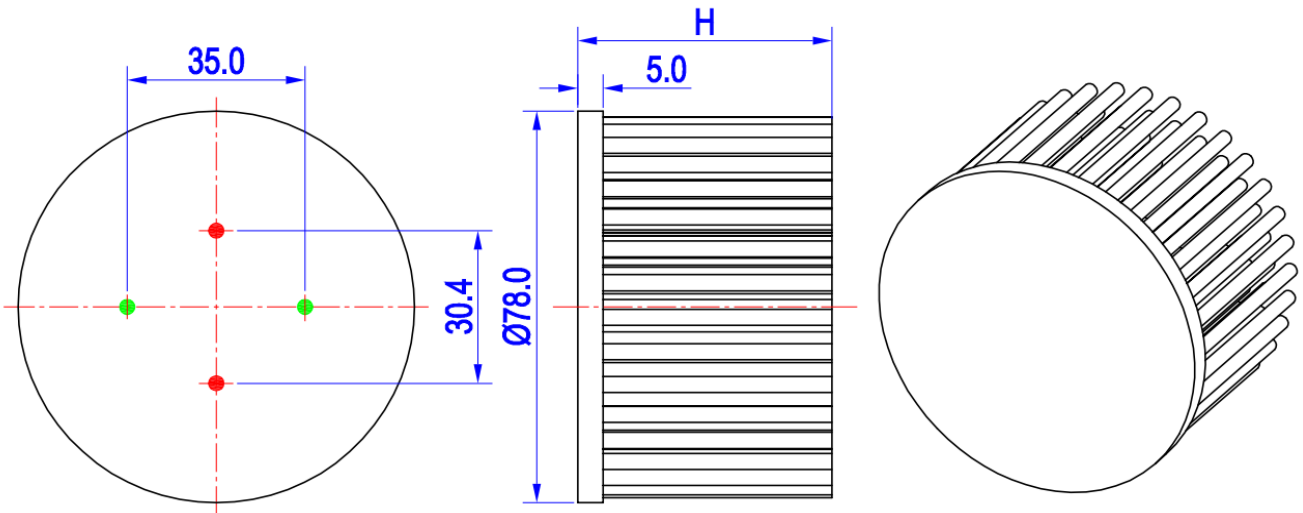
Example:GooLED-SAM-78 **1** - **2** - **3**

- 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 TE Holder 2213258-1	/	/	M3	6.5mm	35.0mm/ 2-@180° (Zhaga book 3)
	L016D; L018D; L026D;	BJB Holder 47.319.2021.50 TE Holder 2213254-1	FN14828-M; FN14637-S;				
	L040C;	TE Holder 2213382-1	/	FN15xxx;			



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### GooLED-SAM-7830 Pin Fin LED Heat Sink $\Phi$ 78mm for Samsung

#### The product data table

	<b>Model No.</b>	GooLED-SAM-7830
	<b>Heatsink Size</b>	$\Phi$ 78xH30mm
	<b>Heatsink Material</b>	AL1070
	<b>Finish</b>	Black Anodized
	<b>Weight (g)</b>	138.0
	<b>Dissipated power (T<sub>hs-amb</sub>,50°C)</b>	16.5 (W)
	<b>Cooling surface area (mm<sup>2</sup>)</b>	46643
	<b>Thermal Resistance (R<sub>hs-amb</sub>)</b>	3.03 (°C/W)

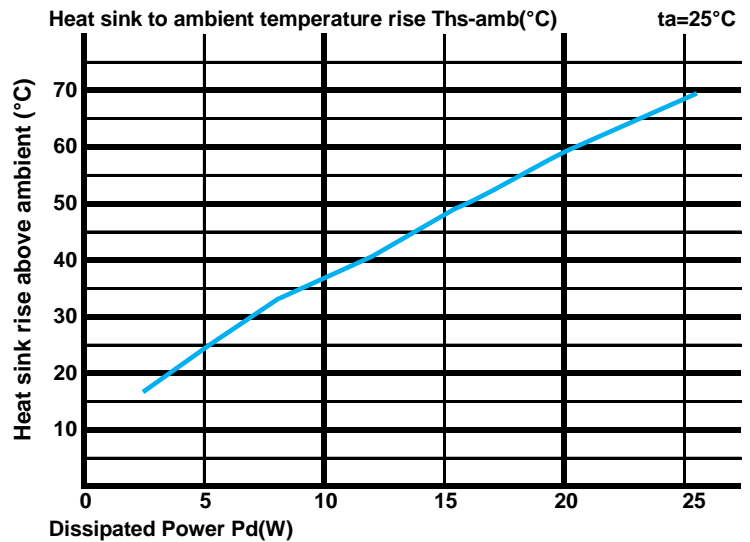
#### The thermal data table

\* 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 efficiency of the LED module;

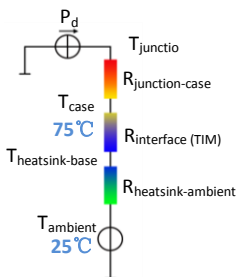
Dissipated Power Pd(W)	Pd = Pe x (1-ηL)	Heat sink to ambient thermal resistance R <sub>hs-amb</sub> (°C/W)	Heat sink to ambient temperature rise T <sub>hs-amb</sub> (°C)
		GooLED-SAM-7830	
5.0		4.80	24.0
10.0		3.60	36.0
15.0		3.13	47.0
20.0		2.95	59.0
25.0		2.72	68.0



\*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:

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