



for

LED



GooLED

GooLED-3530 Pin Fin LED Heat Sink Φ 35mm

Features VS Benefits

- * Mechanical compatibility with direct mounting of the LED modules to the LED cooler and thermal performance matching the lumen packages.
- * For spotlight and downlight designs from 200 to 650 lumen.
- * Thermal resistance range R_{th} 11.1°C/W.
- * Modular design with mounting holes foreseen for direct mounting of a wide range of LED modules and COB's:
- * Diameter 35.0mm - Standard height 30.0mm , Other heights on request.
- * Forged from highly conductive aluminum.
- * 2 standard colors - clear anodised - black anodised
- * Spot Light modules Edison ,Bridelux ,Citizen ,Cree , Tridonic , Seoul , Lustrous , Luminus , LumiLEDs.



- 01) Bridelux ES Star and Vero 10 LED engines;
- 02) Cree: XLamp CXA 13xx LED engines;
- 03) Citizen CLL022-CLU024 LED engines;
- 04) Edison EdiLex II COB LED engines;
- 05) Luminus CLM-9;CXM-9;CHM-9 COB LED engines;
- 06) LumiLEDs Luxeon K LED engines.
- 07) Seoul Semiconductor ZC4, ZC6;
- 08) Tridonic TALEXXmodule SLE modules;



Order Information

Example:GooLED-3530-B

Example:GooLED-3530-1

1 Anodising Color

B-Black

C-Clear

Z-Custom

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.

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The product data table

	Model No.	GooLED-3530
	Heatsink Size	Φ 35xH30mm
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	22.0
	Dissipated power ($T_{hs-amb,50^{\circ}C}$)	4.5 (W)
	Cooling surface area (mm^2)	8915
	Thermal Resistance (R_{hs-amb})	11.1 ($^{\circ}C/W$)

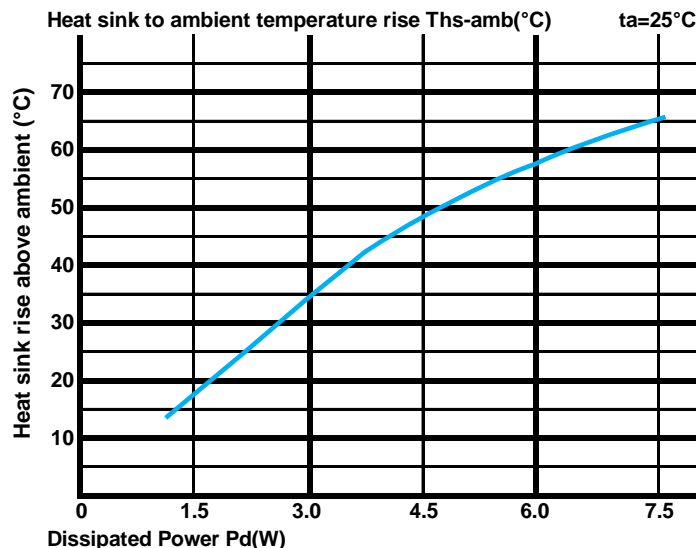
The thermal data table

* 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 ; η_L = Light efficiency of the LED module;

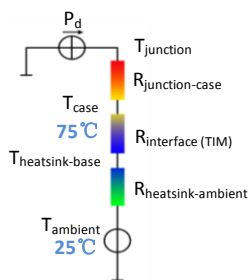
Dissipated Power $P_d(W)$	$P_d = P_e \times (1 - \eta_L)$	Heat sink to ambient thermal resistance R_{hs-amb} ($^{\circ}C/W$)	Heat sink to ambient temperature rise T_{hs-amb} ($^{\circ}C$)
		GooLED-3530	
1.5		11.33	17.0
3.0		11.33	34.0
4.5		10.67	48.0
6.0		9.50	57.0
7.5		8.67	65.0



*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: $\theta = (T_{hs} - T_a) / P_d$

θ - Thermal Resistance [$^{\circ}C/W$]; 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 $R_{interface (TIM)}$ [$^{\circ}C/W$], the thermal resistance with the heat sink is $R_{heatsink-ambient}$ [$^{\circ}C/W$], and the ambient temperature is $T_{ambient}$ [$^{\circ}C$].

*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:

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