

GooLED

GooLED-160140 Pin Fin Heat Sink Φ 160mm

Features VS Benefits

- * Mechanical compatibility with direct mounting of the LED modules to the LED cooler thermal performance matching the lumen packages.
- * For spotlight and downlight designs from 4,800 to 12,000 lumen.
- * Thermal resistance range Rth 0.63°C/W.
- * Modular design with mounting holes foreseen for direct mounting of a wide range of LED modules and COB's:
- * Diameter 160mm - Standard height 140.0mm , Other heights on request.
- * Forged from highly conductive aluminum.
- * With the SMD products (3030 , 2835 , 5050.....) and modules: Bridgelux ,Cree ,Citizen ,Edison , GE lighting, LG Innotek ,Lumileds ,Lumens ,Luminus ,Nichia ,Osram ,Philips ,Prolight Opto, Samsung ,Seoul ,Tridonic ,Vossloh-Schwabe ,Xicato.



- 01) Bridelux: Vero 18/22 Vero SE 18/29 LED engines;
- 02) Cree: XLamp CXA 25xx, Xlamp CXB 25xx, CXA 30xx, Xlamp CXB 30xx LED engines;
- 03) Citizen: CLU036, CLU038, CLU721, CLU711, CLU046, CLU048, CLU731 LED engines;
- 04) Edison: EdiLex III COB LED engines;
- 05) GE lighting: Infusion™ LED engines;
- 06) LG Innotek: 32W, 42W, 56W LED engines;
- 07) Lumileds: LUXEON 1211, LUXEON 1216, LUXEON 1812, LUXEON 1825 LED engines;
- 08) Lumens: Ergon-COB-2530, 2540, 3050, 3070 LED engines;
- 09) Luminus: CXM-18, CLM-22, CXM-22 LED engines;
- 10) Nichia: NFCWL036B, NFCLL036B, NFCWL060B, NFCLL060B LED engines;
- 11) Osram: SOLERIQ® S 19, Core series LED engines;
- 12) Philips: Fortimo SLM LED engines;
- 16) Prolight Opto: PABS, PABA, PACB, PANA LED engines;
- 13) Samsung: LC026B, LC033B, LC040B, LC040D, LC060D, LC080D LED engines;
- 14) Seoul Semiconductor: Acrich MJT COBs, DC COB LED engines;
- 15) Tridonic: SLE G6 19mm, SLE G6 23mm LED engines;
- 17) Vossloh-Schwabe: LUGA Shop and LUGA C LED engines;
- 18) Xicato: XSM, XIM,XTM LED engines;



Product number

Example:GooLED-160140-B

Example:GooLED-160140-**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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GooLED-160140 Pin Fin Heat Sink $\Phi 160\text{mm}$

The Heatsink deta table

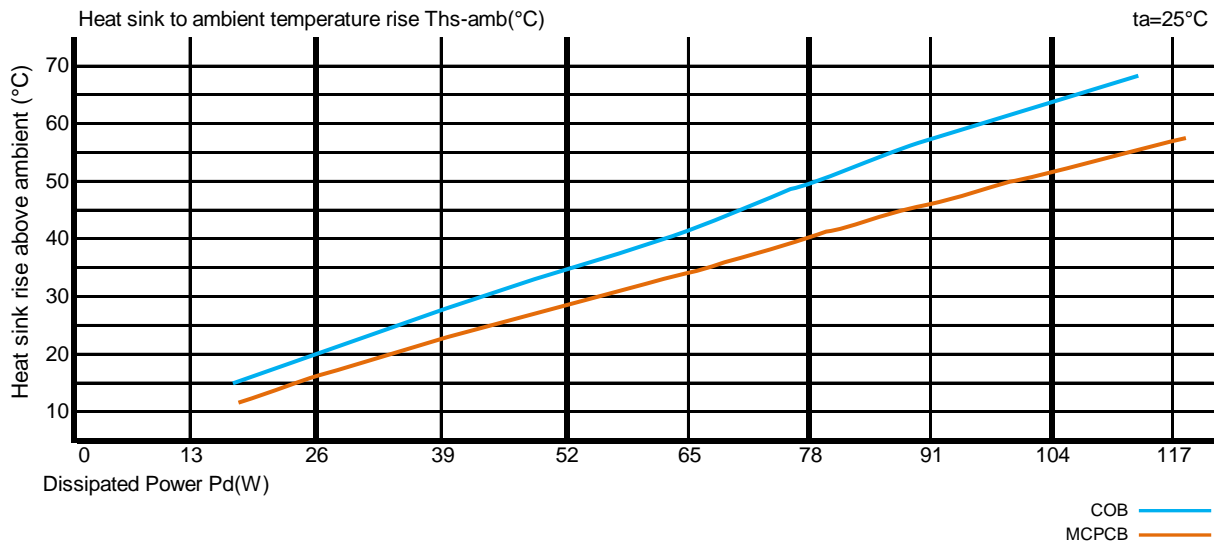
	Model No.	GooLED-160140
	Heatsink Size	$\Phi 160 \times H140\text{mm}$
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	1600.0
	Dissipated power ($T_{hs-amb}, 50^\circ\text{C}$)	80.0 (W)
	Cooling surface area (mm^2)	386400
	Thermal Resistance (R_{hs-amb})	0.63 ($^\circ\text{C}/\text{W}$)

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

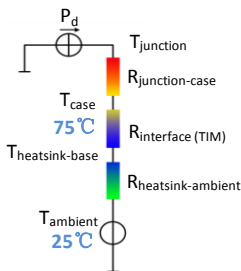
P_d - Dissipated power ; P_e - Electrical power ; η_L = Light efficiency of the LED module;



*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 [$^\circ\text{C}/\text{W}$]; 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 $R_{\text{junction-case}}$, the thermal resistance of the TIM outside the package is $R_{\text{interface (TIM)}}$ [$^\circ\text{C}/\text{W}$], the thermal resistance with the heat sink is $R_{\text{heatsink-ambient}}$ [$^\circ\text{C}/\text{W}$], and the ambient temperature is T_{ambient} [$^\circ\text{C}$].

*Thermal resistances outside the package $R_{\text{interface (TIM)}}$ and $R_{\text{heatsink-ambient}}$ can be integrated into the thermal resistance $R_{\text{case-ambient}}$ at this point. Thus, the following formula is also used:

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