



for

LED



GooLED

GooLED-4830 Pin Fin LED Heat Sink  $\Phi$ 48mm

### 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 400 to 1,300 lumen.
- \* Thermal resistance range Rth 6.25°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of a wide range of LED modules and COB's:
- \* Diameter 48.0mm - Standard height 30.0mm , Other heights on request.
- \* Forged from highly conductive aluminum.
- \* 2 standard colors - clear anodised - black anodised.
- \* Zhaga Book 3 Spot Light modules: Bridgelux ,Cree ,Citizen ,Edison ,GE lighting, LG Innotek ,Lumileds ,Luminus ,Nichia ,Osram ,Philips ,Prolight Opto, Samsung ,Seoul ,Tridonic ,Vossloh-Schwabe ,Xicato.



- 01) Bridelux: Vero 10/13 Vero SE 10/13 LED engines;
- 02) Cree: XLamp CXA 13xx, XLamp CXB 15xx, CXA 18xx LED engines;
- 03) Citizen: CLU026, CLU028, CLU036, CLU038, CLU721, CLU711, CLU701 LED engines;
- 04) Edison: EdiLex III COB LED engines;
- 05) GE lighting: Infusion™ LED engines;
- 06) LG Innotek: 7W, 10W, 16W, W21 LED engines;
- 07) Lumileds: LUXEON 1202, LUXEON 1203 LED engines;
- 08) Lumens: Ergon-COB-15xx, 18xx LED engines;
- 09) Luminus: CXM-6-AC, CIM/CLM/CXM-9 -A LED engines;
- 10) Nichia: NVxxx024Z, NVxxx036Z LED engines;
- 11) Osram: SOLERIQ® S 9/S13, Z6 Mini LED engines;
- 12) Philips: Fortimo SLM LED engines;
- 16) Prolight Opto: PACJ-7xxx-xxxx, PACJ-14xxx-xxxx, PACJ-21xxx LED engines;
- 13) Samsung: L010C, L020C, L003D, L006D, L009D, L013D LED engines;
- 14) Seoul Semiconductor: Acrich MJT COBs, DC COB LED engines;
- 15) Tridonic: SLE G6 10mm, SLE G6 15mm LED engines;
- 17) Vossloh-Schwabe: LUGA Shop and LUGA C LED engines;
- 18) Xicato: XTM LED engines;



### Order Information

Example:GooLED-4830-B

Example:GooLED-4830-**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.

*GooLED*

**GooLED-4830 Pin Fin LED Heat Sink Φ48mm**

**The product data table**

	<b>Model No.</b>	GooLED-4830
	<b>Heatsink Size</b>	Φ48xH30mm
	<b>Heatsink Material</b>	AL1070
	<b>Finish</b>	Black Anodized
	<b>Weight (g)</b>	46.0
	<b>Dissipated power (T<sub>hs-amb</sub>,50°C)</b>	8.0 (W)
	<b>Cooling surface area (mm<sup>2</sup>)</b>	15420
	<b>Thermal Resistance (R<sub>hs-amb</sub>)</b>	6.25 (°C/W)

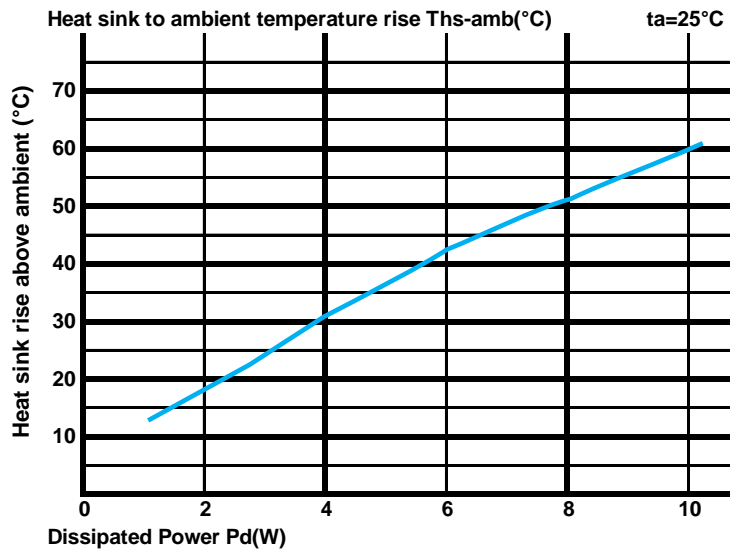
**The thermal data table**

\* 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;

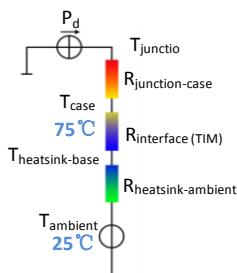
Dissipated Power Pd(W)	Pd = Pe x (1-ηL)	Heat sink to ambient thermal resistance R <sub>hs-amb</sub> (°C/W)	Heat sink to ambient temperature rise T <sub>hs-amb</sub> (°C)
		GooLED-4830	
2.0		9.00	18.0
4.0		7.50	30.0
6.0		7.00	42.0
8.0		6.25	50.0
10.0		5.90	59.0



\*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:

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