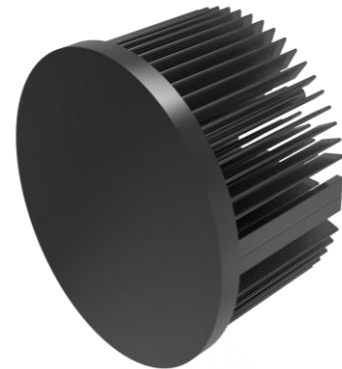


**xLED**

**xLED-13080 Pin Fin LED Heat Sink  $\Phi$ 130mm**

**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 3,500 to 9,200 lumen.
  - \* Thermal resistance range Rth 0.83°C/W.
  - \* Modular design with mounting holes foreseen for direct mounting of a wide range of LED modules and COBs.
  - \* Diameter 130.0mm - Standard height 80.0mm , Other heights on request.
  - \* Forged from highly conductive aluminum.
- 2 standard colors - clear anodized - black anodized.
- Zhaga Book 3 Spot Light 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 engi
- 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 engi
- 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;



**Order Information**

Example:xLED-13080-B

Example:xLED-13080 - **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.

## xLED

### xLED-13080 Pin Fin LED Heat Sink $\Phi 130$ mm

#### The thermal data table

	<b>Model No.</b>	xLED-13080
	<b>Heatsink Size</b>	$\Phi 130 \times H80$ mm
	<b>Heatsink Material</b>	AL1070
	<b>Finish</b>	Black Anodized
	<b>Weight (g)</b>	825.0
	<b>Dissipated power (T<sub>hs-amb</sub>,50°C)</b>	60.0 (W)
	<b>Cooling surface area (mm<sup>2</sup>)</b>	284892
	<b>Thermal Resistance (R<sub>hs-amb</sub>)</b>	0.83 (°C/W)

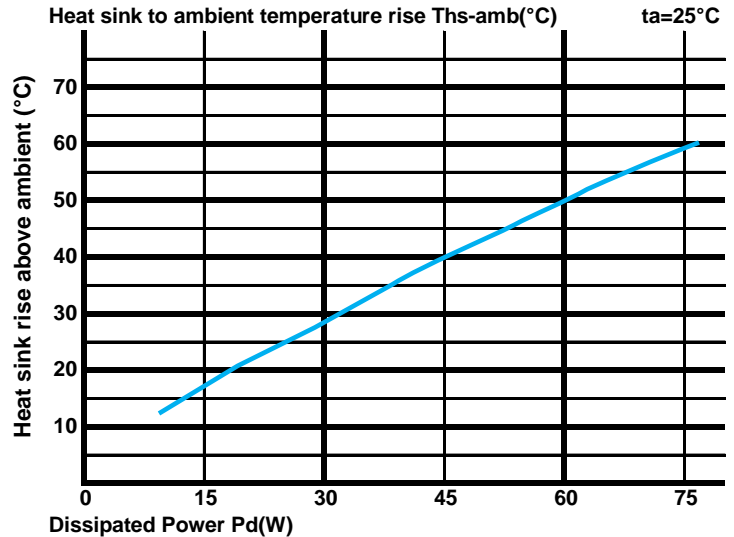
#### The thermal data table

\* 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;

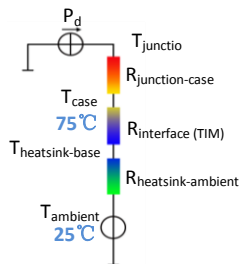
Dissipated Power Pd(W)	Pd = Pe x (1- $\eta_L$ )	Heat sink to ambient thermal resistance R <sub>hs-amb</sub> (°C/W)	Heat sink to ambient temperature rise T <sub>hs-amb</sub> (°C)
		xLED-13080	
15.0		1.13	17.0
30.0		0.93	28.0
45.0		0.89	40.0
60.0		0.83	50.0
75.0		0.77	58.0



\*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:

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