

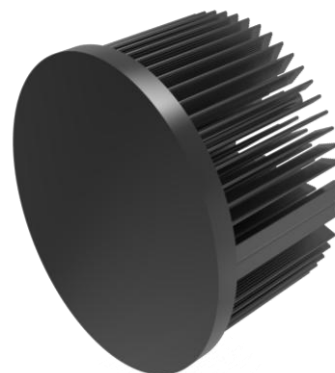


**xLED**

## **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  $R_{th}$  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 en;
- 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 eng
- 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:xLED-13080-B**

**Example:xLED-13080 - **

** 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 Φ130mm**

## The Product data table

	Model No.	xLED-13080
	Heatsink Size	Φ130xH80mm
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	825.0
	Dissipated power (T <sub>hs-amb</sub> , 50°C)	60.0 (W)
	Cooling surface area (mm <sup>2</sup> )	284892
	Thermal Resistance (R <sub>hs-amb</sub> )	0.83 (°C/W)

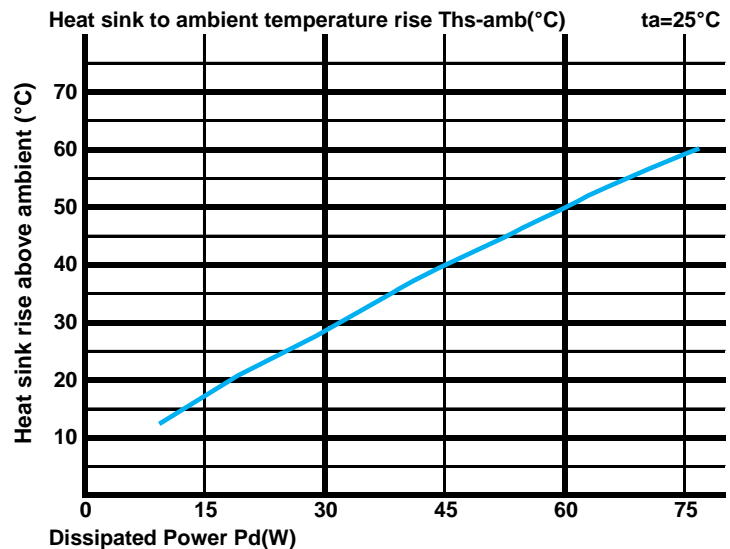
## The thermal data table

\* 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;

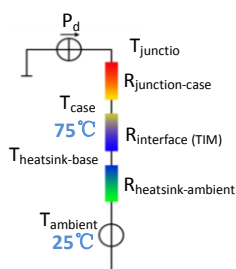
Pd = Pe x (1-η <sub>L</sub> )		Heat sink to ambient thermal resistance R <sub>hs-amb</sub> (°C/W)	Heat sink to ambient temperature rise T <sub>hs-amb</sub> (°C)
		xLED-13080	
Dissipated Power Pd(W)	15.0	1.13	17.0
	30.0	0.93	28.0
	45.0	0.89	40.0
	60.0	0.83	50.0
	75.0	0.77	58.0



\*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 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

\*The thermal resistance between the junction section of the light-emitting diode and the aluminum substrate side of the 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 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:

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