

**xLED**

**xLED-7050 Pin Fin Heat Sink  $\Phi$ 70mm**

**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 1,000 to 2,600 lumen.
- \* Thermal resistance range Rth 3.13°C/W.
- \* Modular design with mounting holes foreseen for direct mounting of a wide range of LED modules and COB's:
- \* Diameter 70.0mm - Standard height 50.0mm , 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 ,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;



**Order Information**

Example:xLED-7050-B

Example:xLED-7050-

- 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-7050 Pin Fin Heat Sink  $\Phi$ 70mm

The product data table

	Model No.	xLED-7050
	Heatsink Size	$\Phi$ 70xH50mm
	Heatsink Material	AL1070
	Finish	Black Anodized
	Weight (g)	150.0
	Dissipated power (Ths-amb,50°C)	16.0 (W)
	Cooling surface area (mm <sup>2</sup> )	91577
	Thermal Resistance (Rhs-amb)	3.13 (°C/W)

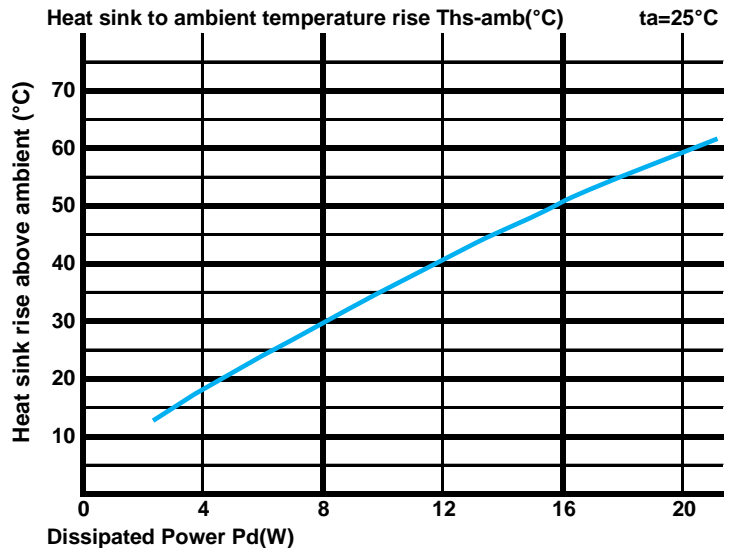
The thermal data table

\* 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;

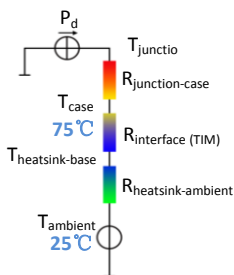
Dissipated Power Pd(W)	Pd = Pe x (1-ηL)	Heat sink to ambient thermal resistance Rhs-amb (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
		xLED-7050	
4.0		4.25	17.0
8.0		3.63	29.0
12.0		3.33	40.0
16.0		3.13	50.0
20.0		2.95	59.0



\*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 Geometric shapes are different, the thermal resistance is different. Formula:  $\theta = (Ths - Ta) / Pd$   
 $\theta$  - Thermal Resistance [°C/W]; Ths - Heatsink temperature ; Ta - 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:

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