Mingfa Tech for LED

xLED

xLED-8050 Pin Fin Heat Sink Φ80mm

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 1,100 to 3,400 lumen.
* Thermal resistance range Rth 2.38°C/W.
* Modular design with mounting holes foreseen for direct mounting of a wide range of
  LED modules and COB's:
* Diameter 80.0mm - 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 eng
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-8050-B

Example:xLED-8050- [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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The product deta table

xLED

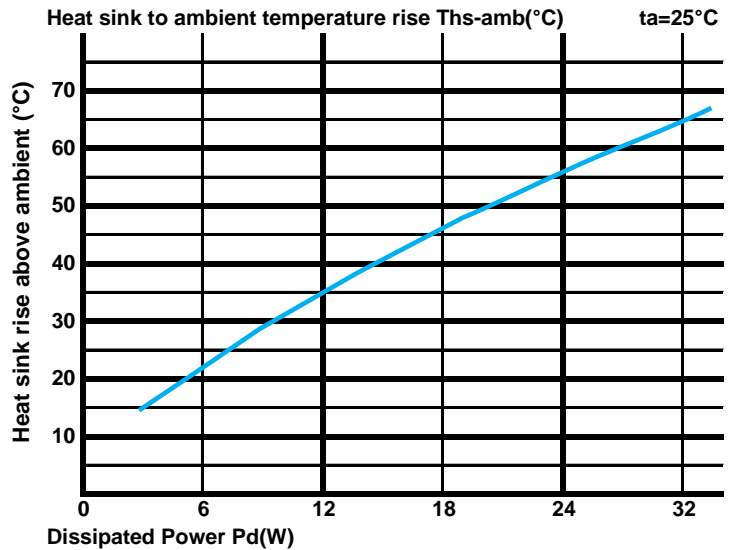| Model No.	xLED-8050
Heatsink Size	Φ80xH50mm
Heatsink Material	AL1070
Finish	Black Anodized
Weight (g)	197.0
Dissipated power (Ths-amb,50℃)	21.0 (W)
Cooling surface area (mm²)	120774
Thermal Resistance (Rhs-amb)	2.38 (°C/W)

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).

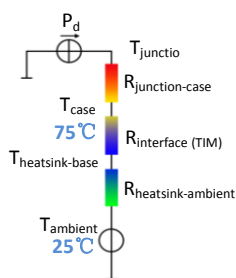   Pd - Dissipated power ; Pe - Electrical power ; ηL = Light effciency of the LED module;

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-8050	
Dissipated Power Pd(W)	6.0	3.50	21.0
	12.0	2.92	35.0
	18.0	2.56	46.0
	24.0	2.29	55.0
	32.0	2.00	64.0

Heat sink to ambient temperature rise Ths-amb(°C)   **ta=25°C**

*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.

P_d
$T_{junctio}$
$R_{junction-case}$
T_{case}
75℃ $R_{interface\,(TIM)}$
$T_{heatsink-base}$
$R_{heatsink-ambient}$
$T_{ambient}$
25℃

*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: θ ＝(Ths－Ta)/Pd

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

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

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