

xLED

xLED-16560 Passive Pin Fin Heatsink Φ 165mm

Features VS Benefits

- * Mechanical compatibility with direct mounting of the SMD products to the LED cooler and thermal performance matching the lumen packages.
- * For flood light, street light and high bay designs from 4,400 to 11,000 lumen.
- * Thermal resistance range R_{th} 0.55°C/W.
- * Product size: Diameter 165mm - Standard height 60mm , Other widths on request.
- * Forged from highly conductive aluminium for optimal thermal performance (AL1070), aluminium 1070 thermal conductivity is 2.0 times higher than ADC12.
- * 2 standard colors - clear anodised - black anodised
- * Waterproof level designs from IP65 to IP67.
- * With the SMD products (3030 , 2835 , 5050.....): Bridgelux , Cree , Edison , Citizen , LG Innotek , Lumileds , Luminus , Lumens , Nichia , Osram , Prolight Opto , Seoul , Samsung , Sharp.



The LED engine and radiator assembly directly Mounting Options

- * Below you find an overview of SMD products which standard fit on the xLED series coolers.
- * In this way mechanical after work and related costs can be avoided, and lighting designers can standardize their designs on a limited number of LED coolers.

Waterproof connectors & Driver



Not only consider waterproofness of the lens, but also on outside connecting line. Mingfa Tech can provide compatible waterproof connector with xLED heat sink.

Features :

The claws and seals excellent design, can hold cable firmly and have a wider cable range. Resistant to salt water, weak acid, alcohol, oil, grease and common solvency.

1. Working temperature: Min -40°C to Max 120°C .
2. Body material: Brass nickel plated .
3. Cable range Dia: 3-6mm .
4. Protection degree: IP68

Mingfa tech product number:

1. 21000001-04 (M8)
2. 21000002-04 (M10)

With the Drivers.

1. MEAN WELL: HBG-100 Series.
2. INVENTRONICS: EUR-096Sxxx Series.

Order Information

Example: xLED-16560-B

Example: xLED-16560 - **1**

1 Anodising Color

- B-Black
- C-Clear
- Z-Custom

Notes:

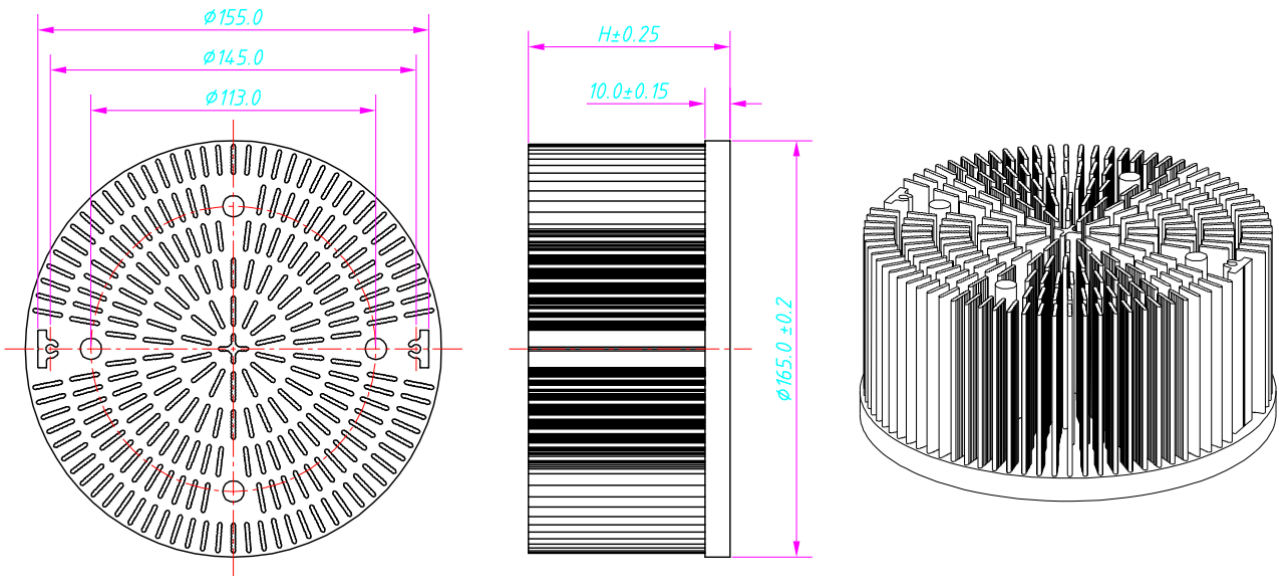
- Mentioned models are an extraction of full product range.
- For specific mechanical adaptations please contact MingfaTech.
- MingfaTech reserves the right to change products or specifications



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Drawings & Dimensions



Product deta table

	<p>xLED</p>
Model No.	xLED-16560
Heatsink Size	Φ165xH60mm
Heatsink Material	AL1070
Finish	Black Anodized
Weight (Kg)	1.2
Dissipated power (Ths-amb,50°C)	90.0 (W)
Cooling surface area (mm²)	362363
Thermal Resistance (Rhs-amb)	0.55 (°C/W)

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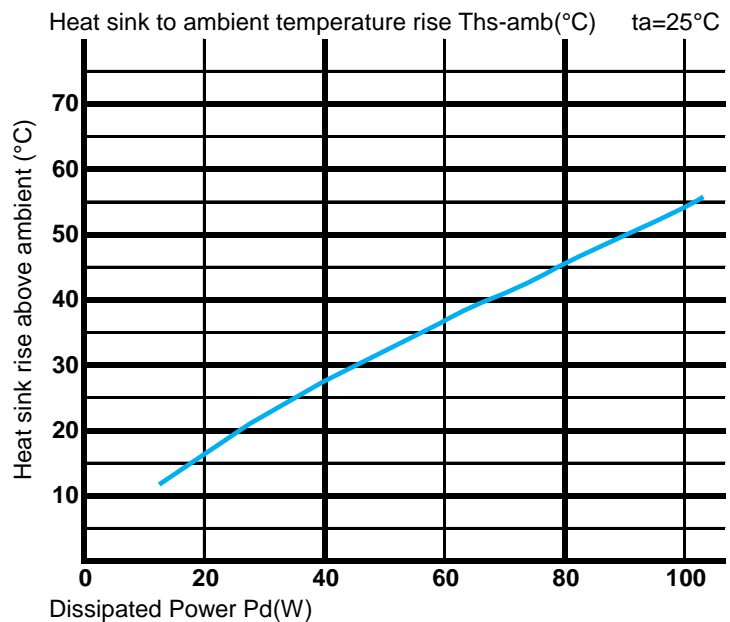
The thermal data table

* Please be aware the dissipated power P_d is not the same as the electrical power P_e of a LED module.

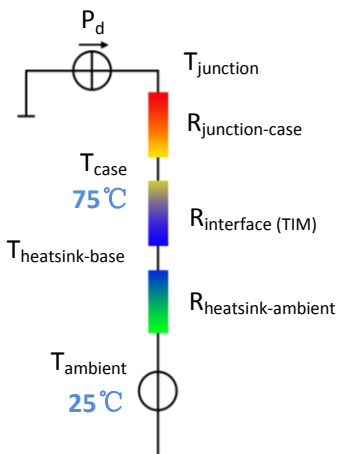
*To calculate the dissipated power please use the following formula: $P_d = P_e \times (1 - \eta_L)$.

P_d - Dissipated power ; P_e - Electrical power ; η_L = Light efficiency of the LED module;

Dissipated Power P_d (W)	$P_d = P_e \times (1 - \eta_L)$	Heat sink to ambient thermal resistance R_{hs-amb} ($^{\circ}\text{C}/\text{W}$)	Heat sink to ambient temperature rise T_{hs-amb} ($^{\circ}\text{C}$)
		xLED-16560	
20.0		0.80	16.0
40.0		0.68	27.0
60.0		0.60	36.0
80.0		0.56	45.0
100.0		0.54	54.0



*The aluminum substrate side of the package outer shell is thermally connected to the heat sink via TIM (Thermal interface). 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.

$$\theta = (T_{hs} - T_a) / P_d$$

θ - Thermal Resistance [$^{\circ}\text{C}/\text{W}$]; T_{hs} - Heatsink temperature ; T_a - Ambient

*The thermal resistance between the junction section of the light-emitting diode and the aluminum substrate side of the package outer shell is $R_{junction-case}$, the thermal of the TIM outside the package is $R_{interface (TIM)}$ [$^{\circ}\text{C}/\text{W}$], the thermal resistance with heat sink is $R_{heatsink-ambient}$ [$^{\circ}\text{C}/\text{W}$], and the ambient temperature is $T_{ambient}$ [$^{\circ}\text{C}$].

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

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