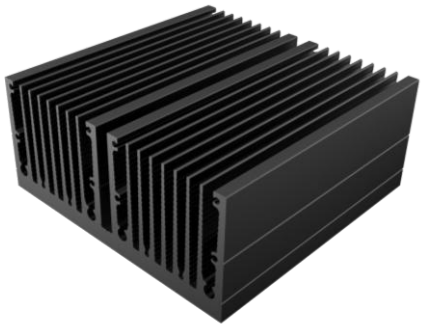
tLED

tLED-115×115×50 Modular Passive LED Heatsink

Features VS Benefits

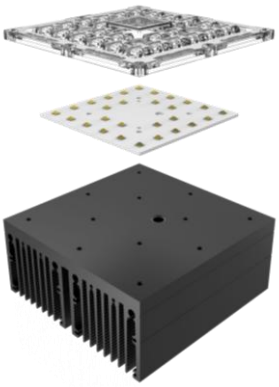
* Mechanical compatibility with direct mounting of the SMD products to the LED cooler and thermal performance matching the lumen packages.
* For flood light,street light and high bay designs from 2800 to 7200 lumen.
* Thermal resistance range Rth 1.04°C/W.
* Product size: L115×W115×H50mm- Standard width 115.0mm , Other widths on request.
* Extruded from highly conductive aluminium for optimal thermal performance (AL6063-T5), aluminium 6063-T5 thermal conductivity is higher than ACD12 1.5 times.
* 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.

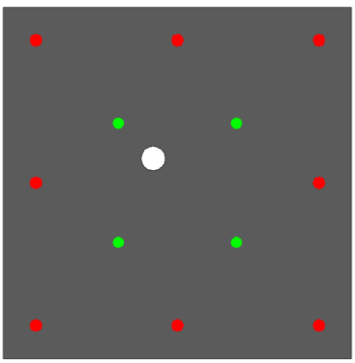


Adura LED engine and radiator assembly directly Mounting Options

* Below you find an overview of SMD products which standard fit on the tLED 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.

Mounting Options





* MCPCB for the green indicator marks.
  Direct mounting with machine screws M3x6.0mm;

* LEDIL Lens "CS16104_STRADELLA-IP-28" for the red indicator marks.
  Direct mounting with machine screws M3x6.0mm;

* Cable feed-through holder for the pink indicator marks.

Waterproof connectors

Not only consider waterproofness of the lens, but also on outside connecting line. Mingfa Tech can provide compatible waterproof connector with tLED 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℃ to Max 120℃.
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）

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Mingfa TECH

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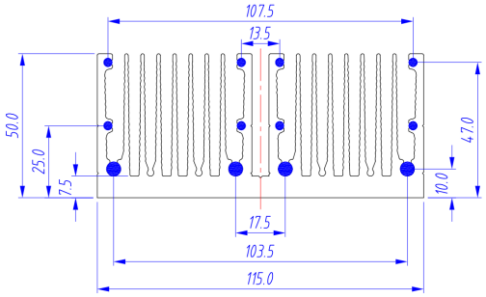
Mounting Guide



Please find has marked blue holes on the left.
1. Using self tapping screw to mounting.Saving the mounting holes process cost.
2. It can mounting enclosure of fixed lighting and tight holder or other lighting parts.

Drawings & Dimensions

Example:tLED-11511550-B-1,2

Example:tLED-115 [1] 50 - [2] - [3]

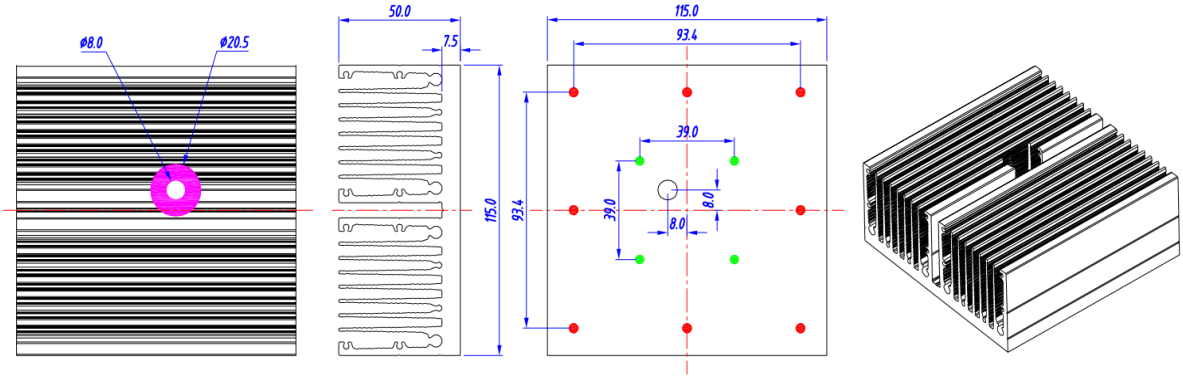
[1] Width (mm)

[2] Anodising Color
B-Black
C-Clear
Z-Custom

[3] Mounting Options - see graphics for details
Combinations available
Ex.order code - 12
means option 1 and 2 combined

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.

MOUNTING OPTION	Module type	Holder NO.	THREAD	THREAD DEPTH	THREAD HOLE DISTANCE
N	None	/	None	None	None
1	MCPCB	/	M3	6.0mm	39.0x39.0mm/ 4-@90°
2	LEDIL Lens	/	M3	6.0mm	93.4x93.4mm/ 4-@90°
3	Wire Holder	/	Φ8.0 THRU Φ20.5		8.0x8.0mm



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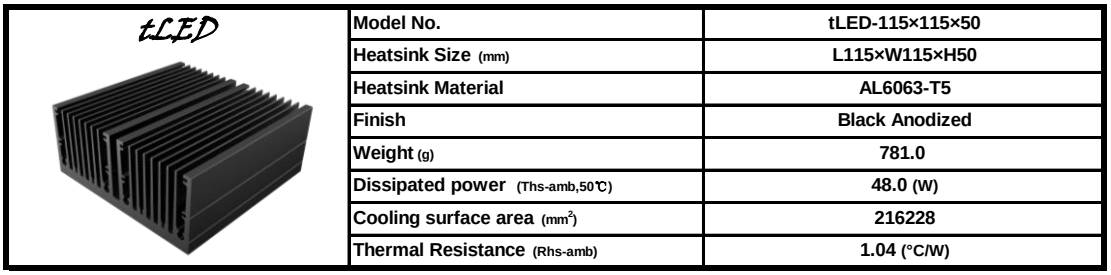
The product deta table



Model No.	tLED-115×115×50
Heatsink Size (mm)	L115×W115×H50
Heatsink Material	AL6063-T5
Finish	Black Anodized
Weight (g)	781.0
Dissipated power (Ths-amb,50℃)	48.0 (W)
Cooling surface area (mm^2)	216228
Thermal Resistance (Rhs-amb)	1.04 (°C/W)

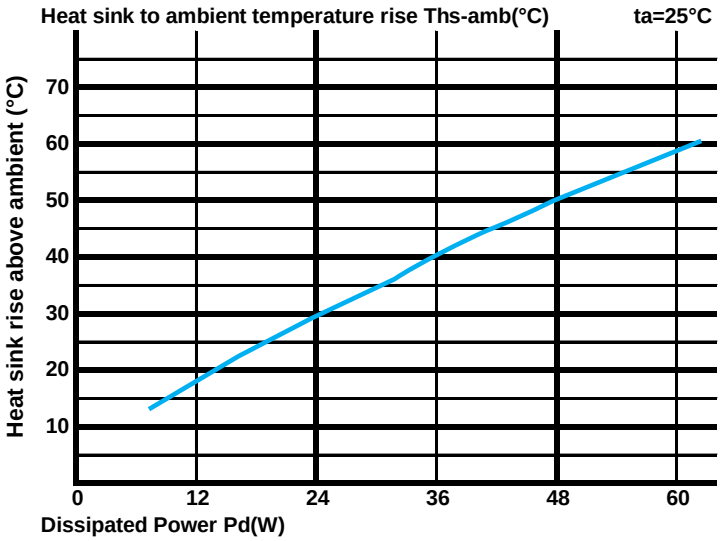
The thermal data table

* 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;

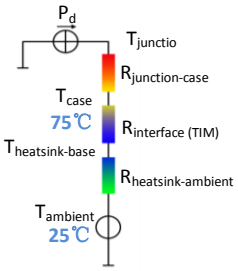
Pd = Pe x (1-ηL)		Heat sink to ambient thermal resistance Rhs-amb (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
		tLED-115×115×50	
Dissipated Power Pd(W)	12.0	1.42	17.0
	24.0	1.21	29.0
	36.0	1.11	40.0
	48.0	1.04	50.0
	60.0	0.97	58.0



*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: θ =(Ths−Ta)/Pd

θ - Thermal Resistance [°C/W] ; Ths - Heatsink temperature ; Ta - 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 $R_{junction-case}$, the thermal resistance of the TIM outside the package is $R_{interface\ (TIM)}$ [°C/W], the thermal resistance with the 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:

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

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