
# GooLED-58 Series Pin Fin Sinks Φ58mm for COB Modular Product Brief

## Features VS Benefits

* Mechanical compatibility with direct mounting of the LED modules to the LED cooler and thermal performance matching the lumen packages.
* Thermal resistance range Rth(5.0°C/W; 3.85°C/W; °C/W).
* Modular design with mounting holes foreseen for direct mounting of a wide range of LED modules and COB's:
* Diameter 58mm - Standard height 30.0mm / 50.0mm / 80.0mm , Other heights on request.
* Forged from highly conductive aluminum.
  2 standard colors - clear anodised - black anodised
  Zhaga Book 3 Spot Light Modules Edison ,Xicato ,Bridgelux , Osram ,Citizen ,Lumileds ,Cree , Tridonic , Vossloh-Schwabe ,Seoul ,LG ,Lustrous ,Prolight ,Samung ,SHARP , Luminus .Philips

1) Xicato XSM, XIM,XTM;
2) Bridgelux ESS, ESR, Vero 10, Vero 13,Vero 18 V-series;
3) Citizen CLL024-CLU028, CLL034-CLU038;
4) Cree XLamp CXA13xx, CXA15xx,CSA18xx;
5) Lumileds Luxeon COB's 1203, 1204, 1205, Luxeon K arrays K12, K16;
6) Osram PrevaLED Core,SOLERIQ P and SOLERIQ S LED engines.
7) Seoul Semiconductor ZC6, ZC12, ZC18,ZC25;
8) Tridonic TALEXXmodule SLE modules;
9) LG Innotek LEMWM18 10W, 13W, 17W
10) Edison EdiLex SLM and EdiLex II COB LED engines.
11) Lustrous LUSTRON 6 series LL604F, LL608D, LL613F, LL620F
12) Prolight Opto PABS, PABA, PACB, PANA
13) Samung LC013,LC019,LC026 COB LED engines.
14) SHARP Mini Zenigata Intermo and Mega Zenigata LED engines.
15) Philips Fortimo SLM LED engines.
16) Vossloh-Schwabe LUGA Shop LED engines.
17) Luminus C##9,C##14 LED engines.

## Order Information

**Example:GooLED-5830-B-#**

**Example:GooLED-58 1 - 2 - 3**

**1 Hight (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**

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.

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

| Brand | Mingfa Tech | | |
|---|---|---|---|
| Series Name | GooLED star heat sinks | | |
| Seriest Number | GooLED-58 | | |
| **Manufacturing Technology** | Cold Forged | | |
| Material | AL 1070 | | |
| Color & Finishing | Black Anodized | | |
| Certification | CE, ROHS, WEEE | | |
| Diameter(mm) | Φ58 | | |
| Height(mm) | 30.0mm | 50.0mm | 80.0mm |
| Item Number | GooLED-5830 | GooLED-5850 | GooLED-5880 |
| Max. Lumen | 1400lm | 1800 lm | 1700 lm |
| **Dissipated Power (Ths-amb,50°C)** | 10.0 W | 13.0 W | 12.0 W |
| **Thermal Resistance Rth（°C/W)** | 5.0 °C/W | 3.85°C/W | 4.17 °C/W |
| **Cooling Surface Area (mm²)** | 27134.0 mm² | 36775.0 mm² | 58826.0 mm² |
| Net Weight (g) | 79.0 g | 108.0 g | 213.0 g |
| **Quantity (pcs/CTN)** | 160 pcs | 96 pcs | 64 pcs |
| Modular Types | COB | COB | COB |
| For Environments | Indoor area | | |
| For Lightings | Down lights,Architectural lights | | |
| For Application | Retail & Hospitality,Mall & Food,Architectural & Museums,Office & Education, Station & Airport,Healthcare | | |
| For LED brands | Adura,Bridgelux,BJB,Citizen,Cree,Edison,GE,LG,Lumileds,Lumens,Luminus,Ledil,Nichia, Osram,Philips,Prolight Opto,Samsung,Seoul,Sharp,Tridonic,Vossloh Schwabe,Xicato,Zhaga | | |

* 3D files are avaliable in ParaSolid, STP and IGS on request

* The thermal resistance Rth is determined with a calibrated heat source of 14mm×14mm central placed on the heat sink, Tamb 40° and an open environment. Reference data @ heat sink to ambient temperature rise Ths-amb 50°C
The thermal resistance of a LED cooler is not a fix value and will vary with the applied dissipated power Pd

* Dissipated power Pd. Reference data @ heat sink to ambient temperature rise Ths-amb 50°C
The maximal dissipated power needs to be verified in function of required case temperature Tc or junction temperature Tj and related to the estimated ambient temperature where the light fixture will be placed
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

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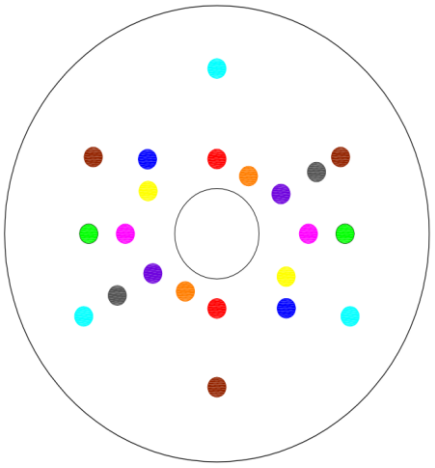
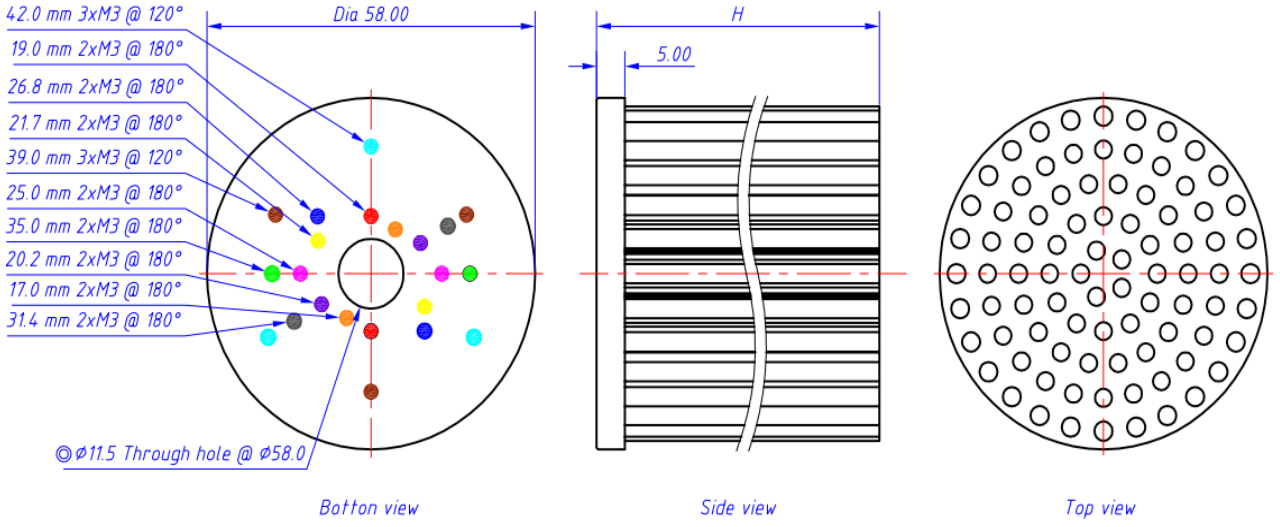
## GooLED-58 Series Φ58mm Pin Fin Heat Sink Drawings

### Drawings &Type Selection



| No. | Finish | Mounting Hole |
|---|---|---|
| A1 | | 17.0 mm 2xM3 @ 180° |
| A2 | | 19.0 mm 2xM3 @ 180° |
| A3 | | 20.2 mm 2xM3 @ 180° |
| A4 | | 21.7 mm 2xM3 @ 180° |
| A5 | | 25.0 mm 2xM3 @ 180° |
| A6 | | 26.8 mm 2xM3 @ 180° |
| A7 | | 31.4 mm 2xM3 @ 180° |
| A8 | | 35.0 mm 2xM3 @ 180° |
| A9 | | 39.0 mm 3xM3 @ 120° |
| A10 | | 42.0 mm 3xM3 @ 120° |
| A11 | | ◎Ø11.5 Through hole @ Ø58.0 |




### Product display

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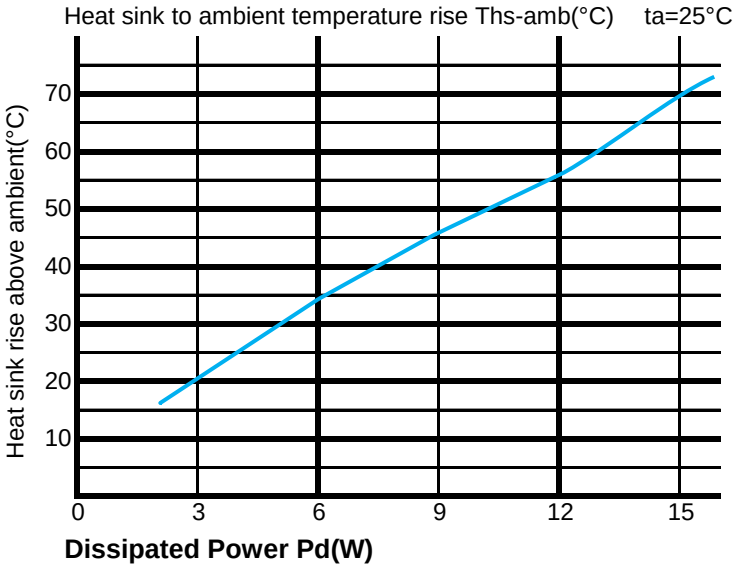
## GooLED-58 Series Φ58mm Material AL1070 Pin Fin Heat Sinks Thermal Data

### The thermal data table

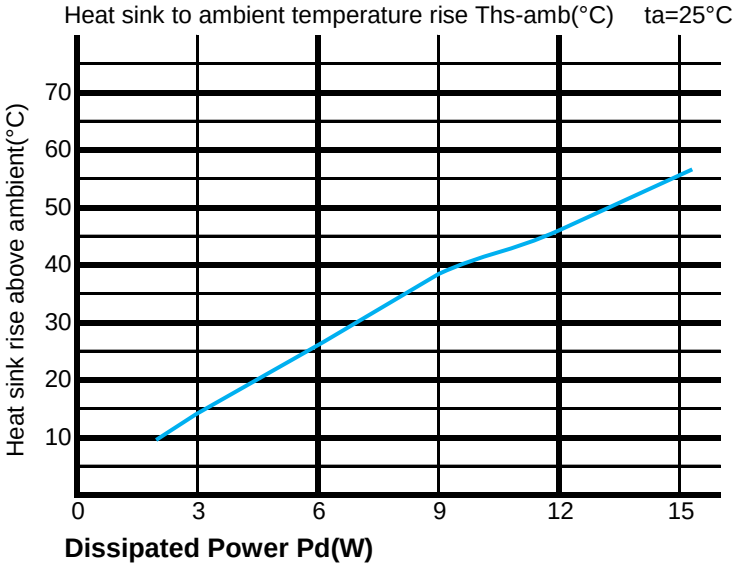
**GooLED-5830 thermal data**

| Pd = Pe x (1-ηL) | | Heat sink to ambient thermal resistance Rhs-amb (°C/W) | Heat sink to ambient temperature rise Ths-amb (°C) |
|---|---|---|---|
| | | GooLED-5830 | GooLED-5830 |
| Dissipated Power Pd(W) | 3 | 6.67 | 20 |
| | 6 | 5.83 | 35 |
| | 9 | 5.11 | 46 |
| | 12 | 4.75 | 57 |
| | 15 | 4.67 | 70 |
| | | | |




**GooLED-5850 thermal data**

| Pd = Pe x (1-ηL) | | Heat sink to ambient thermal resistance Rhs-amb (°C/W) | Heat sink to ambient temperature rise Ths-amb (°C) |
|---|---|---|---|
| | | GooLED-5850 | GooLED-5850 |
| Dissipated Power Pd(W) | 3 | 5 | 15 |
| | 6 | 4.67 | 26 |
| | 9 | 4.33 | 39 |
| | 12 | 4 | 46 |
| | 15 | 3.8 | 57 |
| | | | |

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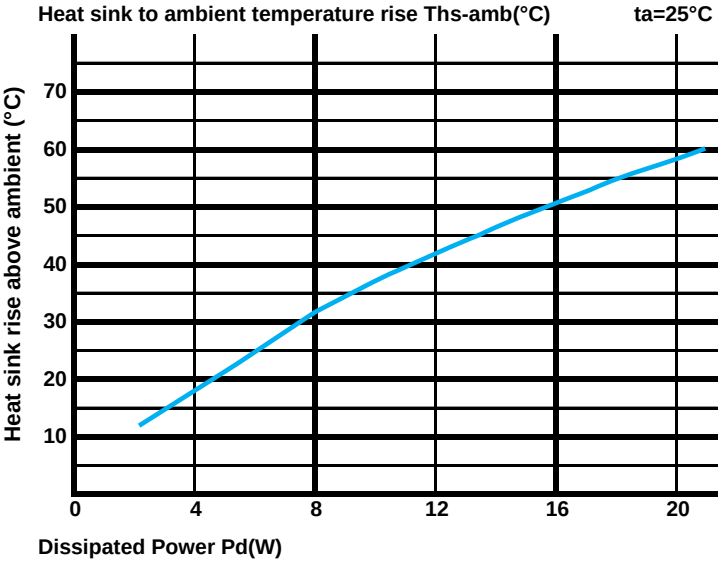
# GooLED-58 Series Φ58mm Material AL1070 Pin Fin Heat Sinks Thermal Data

## The thermal data table

### GooLED-5880 thermal data

| Pd = Pe x (1-ηL) | | Heat sink to ambient thermal resistance Rhs-amb (°C/W) | Heat sink to ambient temperature rise Ths-amb (°C) |
|---|---|---|---|
| | | GooLED-5880 | GooLED-5880 |
| Dissipated Power Pd(W) | 4.0 | 4.75 | 19.0 |
| | 8.0 | 4.00 | 32.0 |
| | 10.0 | 4.20 | 42.0 |
| | 16.0 | 3.19 | 51.0 |
| | 20.0 | 2.95 | 59.0 |
| | | | |




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

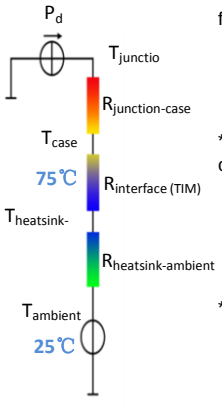
*To calculate the dissipated power please use the following formula: Pd = Pe x (1-ηL).

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

*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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