



ActiLED ActiLED-G5850 Series Active Heat Sinks Φ 58mm 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 R_{th} (0.45°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 50.0mm , Other heights on request.
- * Forged from highly conductive aluminum.
- 2 standard colors - clear anodised - black anodised



12V, 2-Watt, Fan-Power Module, Meanwell IRM-02-12



Meanwell 100-watt LED Driver

- 1) Bridgelux Vero 29, V-series;
- 2) Citizen CLL040-CLU048, CLL055-CLU058;
- 3) Cree XLamp CXA30xx, CXA35xx; CXB30xx, CXB35xx;
- 4) Philips Fortimo SLM LED engines.
- 5) Lumileds Luxeon COB's 1221, 1825;
- 6) LG Innotek F COB G1 Series;
- 7) Prolight Opto PACL-115xxx-xxx, PACN-260xxx-xxx;
- 8) Seoul Semiconductor MJT COB SAW033xx, SAW833xx, SAW933 Series;

Type 1: 100-watt 38mm US/European MCB-style COB, shown here mounted with solder-less BJB 47-319 COB connector/holder.

Holder can be purchased separately from many online sellers or any BJB distributors such as Mouser Electronics, Mouser part number 339-47319416050

Type 2: 100 watt "China-style" COB with integral lead-frame-- facilitating easy solderable wire connections (separate COB holder not needed)

Type 3: Typical US/European style COB, simply with soldered wire connections, no holder

TYPICAL APPLICATIONS:()
 These two suggested standard, low-cost, UL-recognized modules are available from virtually any authorized Meanwell distributor. However, any modules with specifications can also be used.

Order Information

Example: ActiLED-G5850 -B-#

Example: ActiLED-G58 **1** - **2** - **3**

- 1** Height (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.

ActiLED ActiLED-G5850 Series Active Heat Sinks Φ 58mm for COB Modular Product Brief

The product data table



Brand	Mingfa Tech		
Series Name	ActiLED Active heat sink		
Series Number	ActiLED-G5850		
Manufacturing Technology	Cold Forged		
Material	AL1070		
Color & Finishing	Black Anodized		
Certification	CE, ROHS, WEEE		
Fan data	Size:40x40x20mm;	Electric power:0.25W;	Speed:4000RPM ;
Diameter(mm)	Φ 58.0		
Heat sink Height(mm)	30.0mm		
Typical Lumens (Depends on LED Type)	1000-15000lm		
Dissipated Power (Ths-amb, 25°C)	100.0W		
Thermal Resistance Rth (°C/W)	0.45°C/W		
Cooling Surface Area (mm²)	27134.0 mm ²		
Net Weight (g)	115.0g		
Quantity(pcs/CTN)	96 pcs		
Modular Types	COB or SMD arrays		
For Environments	Indoor area		
For Lightings	Down lights,Architectural lights,Hibay		
For Application	Retail & Hospitality,Mall & Museums,Office		
For LED brands	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 available in ParaSolid, STP and IGS on request

* The thermal resistance Rth is determined with a calibrated heat source of 14mmx14mm 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: $P_d = P_e \times (1 - \eta_L)$

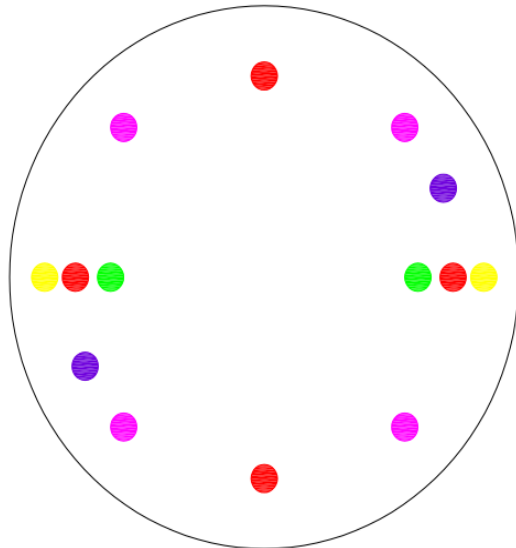
Pd - Dissipated power

Pe - Electrical power

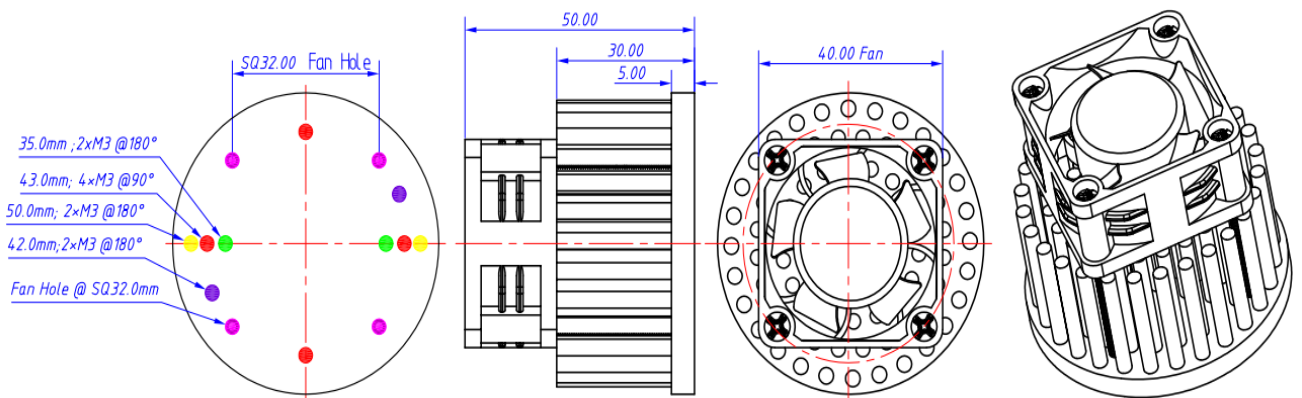
η_L = Light efficiency of the LED module

ActiLED ActiLED-G5850 Series Φ 58mm COB Active Heat Sink Drawings

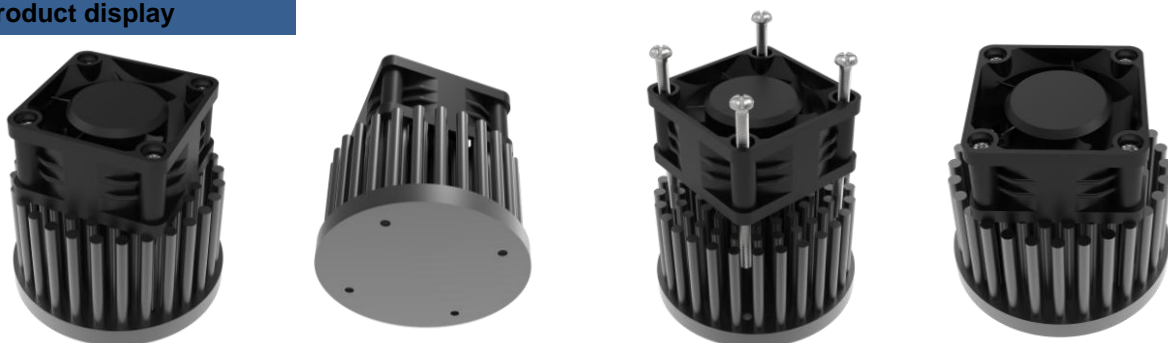
Drawings & Type Selection



No.	Finish	Mounting Hole
A1	Green	35.0 mm 2xM3 @ 180°
A2	Red	43.0 mm 4xM3 @ 90°
A3	Purple	45.0 mm 2xM3 @ 180°
A4	Yellow	50.0 mm 2xM3 @ 180°



Product display

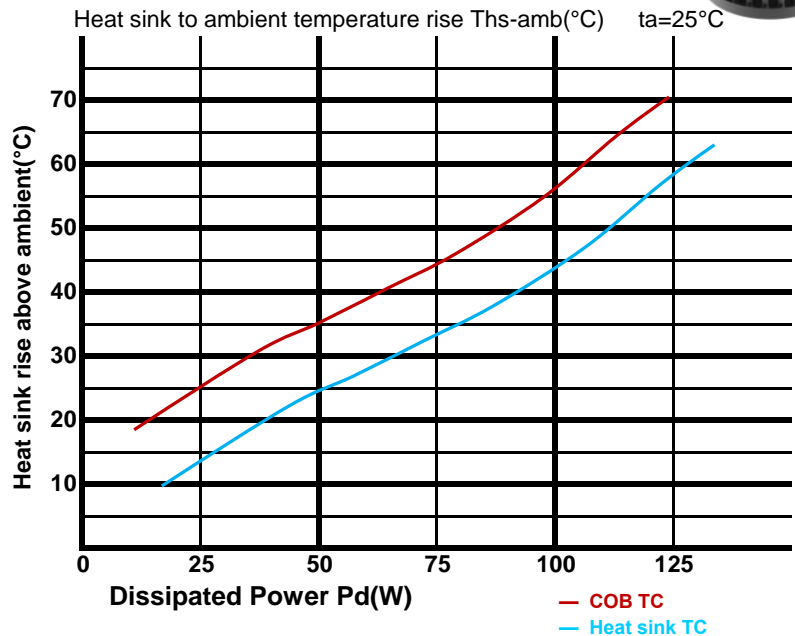


ActiLED ActiLED-G5850 Series Φ58mm Active Cooling Thermal Data

The thermal data table



Dissipated Power Pd(W)	Heat sink to ambient temperature rise Ths-amb (°C)	
	ActiLED-G5850	
35.0	15.8	
50.0	22.5	
60.0	27.0	
70.0	31.5	
80.0	34.0	
100.0	50.0	



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

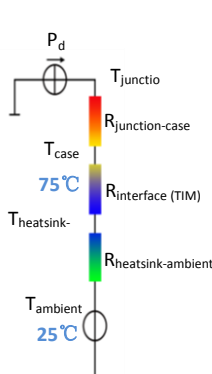
*To calculate the dissipated power please use the following formula: $P_d = P_e \times (1 - \eta_L)$.

Pd - Dissipated power ; Pe - Electrical power ; η_L = Light efficiency 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: $\theta = (Ths - Ta) / Pd$

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:

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