



for

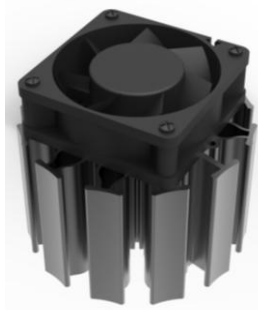
LED



## ActiLED ActiLED-F8560 Series Active Heat Sinks Ø85mm 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 (0.48°C/W).
- \* Modular design with mounting holes foreseen for direct mounting of a wide range of LED modules and COB's:
- \* Diameter 85mm - Standard height 60.0mm , Other heights on request.
- \* Extruded 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) Bridgelux ESS, ESR, Vero 10, Vero 13, Vero 18, V-series;
- 2) Citizen CLL022-CLU028, CLL032-CLU038, CLL040-CLU048;
- 3) Cree XLamp CXA13xx, CXA15xx, CXA18xx, CXA25xx, CXA30xx;
- 4) Philips Fortimo SLM LED engines.
- 5) Lumileds Luxeon COB's 1203, 1204, 1205, 1208, 1212, Luxeon K arrays K12, K16;
- 6) LG Innotek LEMWM18 27W, 24W, 40W, 60W, 80W;
- 7) Seoul Semiconductor ZC25, ZC40, ZC60, ZC100 Series;
- 8) Tridonic TALEXXmodule SLE Modules engines;
- 9) Edison EdiLex SLM and EdiLex II COB LED engines;
- 10) OSRAM PrevaLED Core, SOLERIQ P, SOLERIQ E and SOLERIQ S LED engines;
- 11) Prolight Opto PABS, PABA, PACB, PANA;
- 12) SHARP Tiger Zenigataand and Mega Zenigata LED engines;
- 13) Samung COB LC026B, LC033B, LC040BCOB LED engines;
- 14) Vossloh-Schwabe Vossloh-Schwabe LUGA Shop LED engines;

### Order Information

Example: FanLED-F8560-B-#

Example: FanLED-85 **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.

**ActiLED** ActiLED-F8560 Series Active Heat Sinks  $\Phi$ 85mm for COB Modular Product Brief

The product data table



<b>Brand</b>	<b>Mingfa Tech</b>		
<b>Series Name</b>	ActiLED Active heat sink		
<b>Series Number</b>	ActiLED-F8560		
<b>Manufacturing Technology</b>	Aluminum extrusion		
<b>Material</b>	AL6063-T5		
<b>Color &amp; Finishing</b>	Black Anodized		
<b>Certification</b>	CE, ROHS, WEEE		
<b>Fan date</b>	Size:60x60x20mm;	Electric power:0.48W;	Speed:2900RPM ;
<b>Diameter(mm)</b>	$\Phi$ 85		
<b>Heat sink Height(mm)</b>	40.0mm		
<b>Max. Lumen</b>	9000lm		
<b>Dissipated Power (Ths-amb,50°C)</b>	71.0 W		
<b>Thermal Resistance Rth (°C/W)</b>	0.48°C/W		
<b>Cooling Surface Area (mm²)</b>	79151.3 mm²		
<b>Net Weight (g)</b>	249.9g		
<b>Quantity(pcs/CTN)</b>	36 pcs		
<b>Modular Types</b>	COB		
<b>For Environments</b>	Indoor area		
<b>For Lightings</b>	Down lights,Architectural lights		
<b>For Application</b>	Retail & Hospitality,Mall & Museums,Office		
<b>For LED brands</b>	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

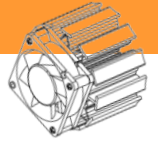
To calculate the dissipated power please use the following formula:  $P_d = P_e \times (1 - \eta_L)$

Pd - Dissipated power

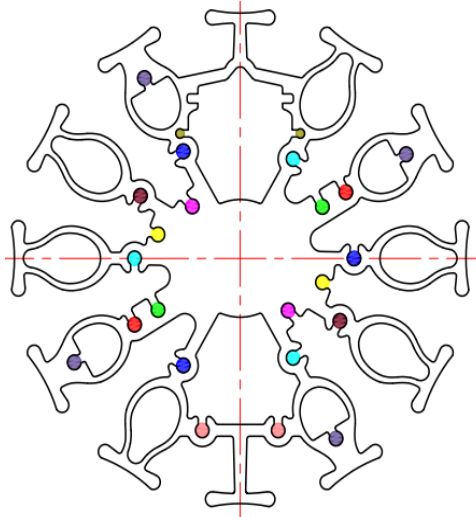
Pe - Electrical power

$\eta_L$  = Light efficiency of the LED module

**ActiLED** ActiLED-F8560 Series  $\Phi$ 85mm COB Active Heat Sink Drawings

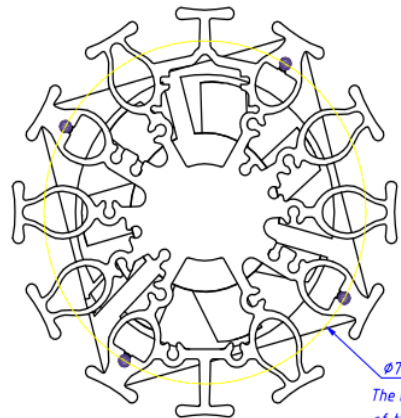
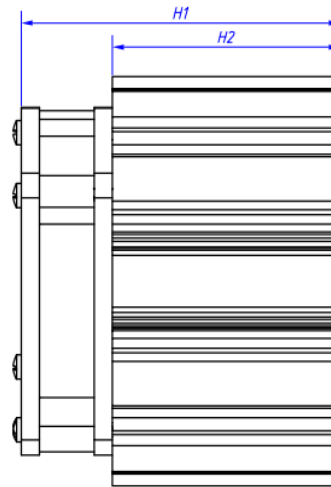
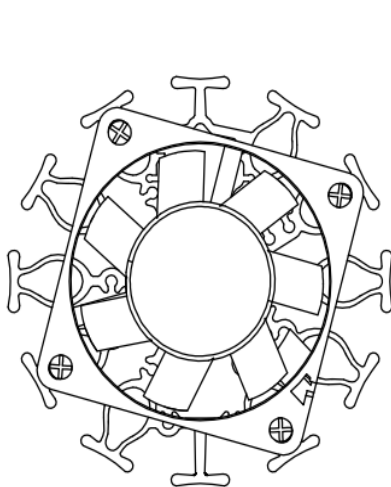


**Drawings & Type Selection**



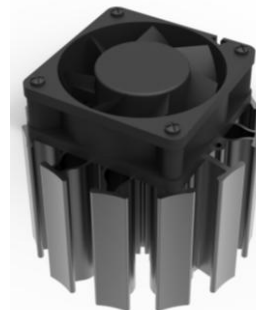
No.	Finish	Mounting hole
A1		25.0mm;2xM3@180°
A2		31.4mm;2xM3@180°
A3		35.0mm;2xM3@180°
A4		39.0mm;3xM3@120°
A5		42.0mm;3xM3@120°
A6		42.5mm;2xM3@180°
A7		45.0mm;2xM3@180°
A8		70.7mm;4xM3@90°
A9		14.0mm;2xM3
A10		22.2mm;2xM2

Fan Hole



$\Phi$ 70.70  
The number of the fan is installed

**Product display**

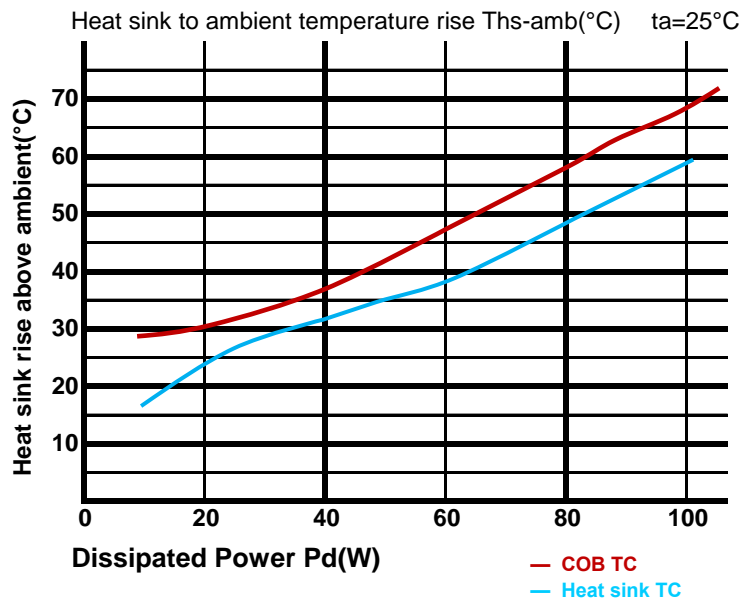




The thermal data table

ActiLED-F8560 thermal data

Dissipated Power Pd(W)	Pd = Pe x (1-ηL)	Heat sink to ambient thermal resistance Rhs-amb (°C/W)	Heat sink to ambient temperature rise Ths-amb (°C)
		ActiLED-F8560	ActiLED-F8560
22.7		1.18	26.7
24.3		1.13	27.5
34.1		0.85	29.1
41.8		0.78	33
56.5		0.65	37.1
71		0.63	46.2



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

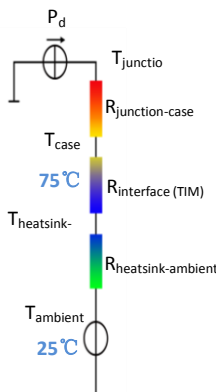
\*To calculate the dissipated power please use the following formula: Pd = Pe x (1-ηL).

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

$\theta$  - 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:

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