

MechaTronix *in* LED

ModuLED Giga Philips Fortimo Star LED Cooler ϕ 152mm



Features & Benefits

- The ModuLED Giga modular passive LED coolers are specifically designed for luminaires using the Philips Fortimo LED modules. Mechanical compatibility with direct mounting of the LED modules to the LED cooler and thermal performance matching the lumen packages.
- For low and high bay designs from 2,000 to 9,000 lumen
- Thermal resistance range Rth 0.7 - 1.13°C/W
- Modular design with mounting holes foreseen for direct mounting of Philips Fortimo SLM GEN3 and DLM GEN5 LED modules.
- Diameter 152mm - Standard height 20 / 50mm
Other heights on request
- Extruded from highly conductive aluminum



Order Information



Example : ModuLED Giga 15250-B

ModuLED Giga 152 **1** - **2**

- 1** Height (mm)
- 2** Anodising Color
B - Black
C - Clear

ModuLED Giga is designed in this way

that you can mount various LED modules on the same LED cooler

Simple mounting with self tapping screws

Recommended screw force 6lb/in

Screws are available from MechaTronix

MechaTronix *in* LED

ModuLED Giga Philips Fortimo Star LED Cooler ø152mm



Product Details

Model n°	<i>ModuLED Giga 15220</i>	<i>ModuLED Giga 15250</i>
Dimension (mm) ^{*1}	ø152 x h20	ø152 x h50
Volume (mm ³)	116158	290965
Cooling Surface (mm ²)	83469	190296
Weight (gr)	314	786
Thermal Resistance (°C/W) ^{*2}	1.13	0.7
Power Pd (W) ^{*3}	44	71
Heat Sink Material	AL6063-T5	AL6063-T5

^{*1} 3D files are available in ParaSolid, STP and IGS on request

^{*2} The thermal resistance Rth is determined with a calibrated heat source of 30mm x 30mm 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

^{*3} 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: $Pd = Pe \times (1 - \eta_L)$

Pd - Dissipated power

Pe - Electrical power

η_L = Light efficiency of the LED module

Notes:

- MechaTronix reserves the right to change products or specifications without prior notice.
- Mentioned models are an extraction of full product range.
- For specific mechanical adaptations please contact MechaTronix.

MechaTronix in LED

ModuLED Giga Philips Fortimo Star LED Cooler ø152mm



Mounting Options

The ModuLED Giga modular passive LED coolers are standard foreseen from a variety of mounting holes which allow direct mounting of LED engines, COB's and secondary optics on the LED heat sink.

In this way mechanical afterwork and related costs can be avoided, and lighting designers can standardize their designs on a limited number of LED coolers.

Below you find an overview of Philips Fortimo LED modules which standard fit on the ModuLED Giga LED cooler.

MechaTronix performs thermal validation tests on each of the LED modules mounted on the LED cooler and publishes this data in the LED brand thermal validation reports.

For a full overview of available LED coolers for Philips Fortimo LEDs, please refer to the Philips Fortimo LED cooler overview on www.led-heatsink.com/Download.php or scan the QR code here.



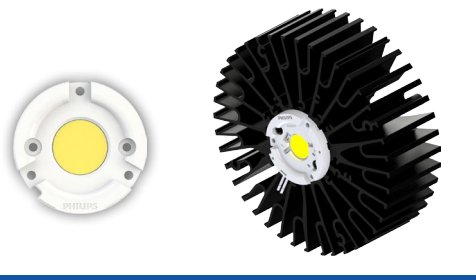
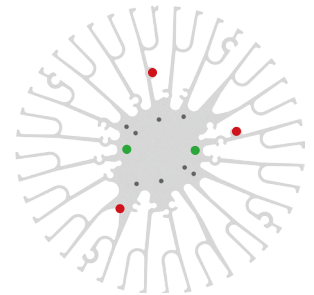
Philips LED Modules

PHILIPS

The third Philips Fortimo LED SLM generation is the ideal solution for spot lighting fixtures and highly efficient compact down light luminaires. It is specifically designed for the retail market showcasing retail merchandise in bright and vivid light. This generation is equipped with new Chip-On-Board (COB) LED technology. This technology enables the creation of the most efficient point source Philips LED system available.

Mounting indicator marks overview

MechaTronix 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 pads or phase change thermal pads can be pre-applied from MechaTronix.



Philips Fortimo SLM GEN3 LED Modules

Model names

- Fortimo LED SLM 4000 G3
- Fortimo LED SLM 4500 G3

Mounting

- Direct mounting with 2 screws M3 x 6mm
- Green indicator marks



Philips Fortimo DLM GEN5 LED Modules

Model names

- Fortimo DLM 3000 G5
- Fortimo DLM 5000 G5

Mounting

- Direct mounting with 3 self tapping screws M3 x 8mm
- Red indicator marks

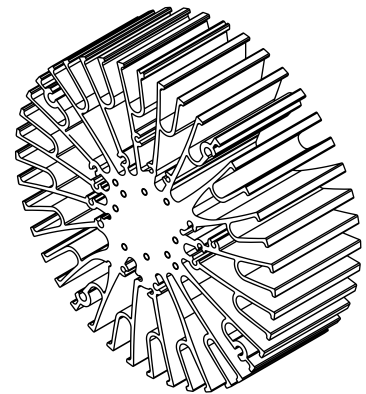
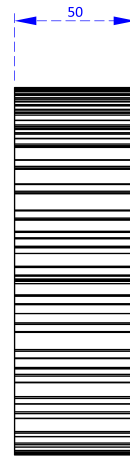
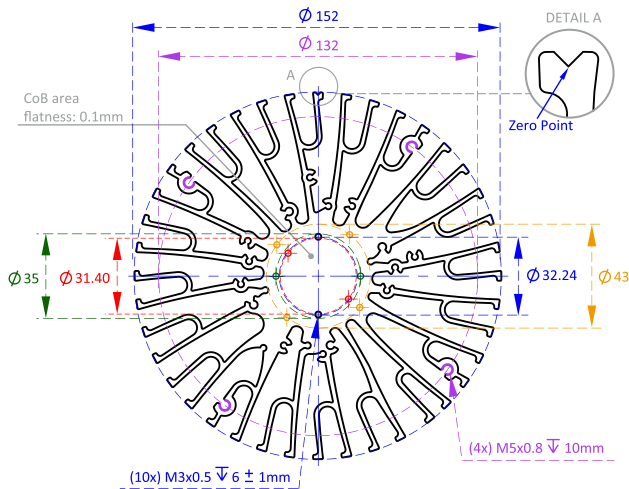
MechaTronix in LED

ModuLED Giga Philips Fortimo Star LED Cooler ø152mm



Drawings & Dimensions

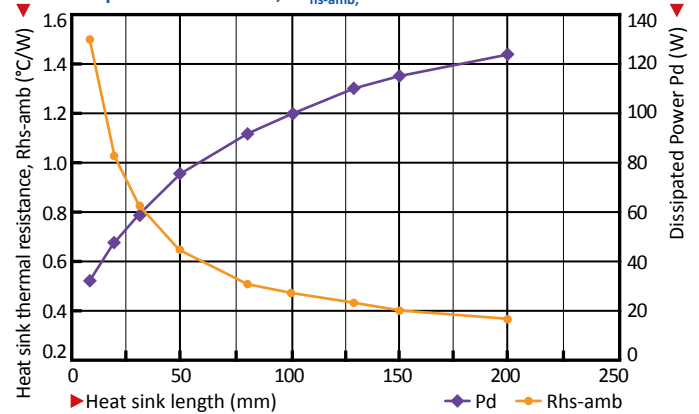
Example: ModuLED Giga 15250



Thermal Data

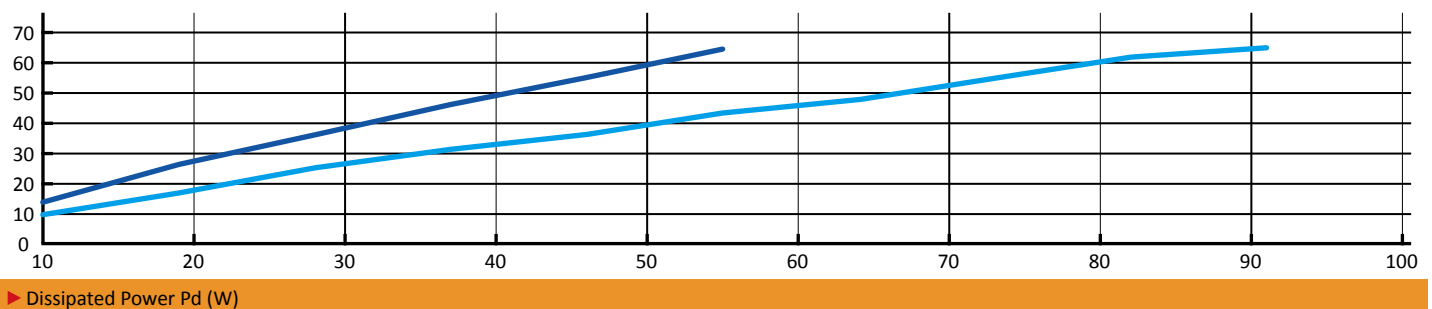
$P_d = P_e \times (1 - \eta_L)$	Heat sink to ambient thermal resistance R_{hs-amb} (°C/W)		Heat sink to ambient temperature rise T_{hs-amb} (°C)	
	ModuLED Giga 15220	ModuLED Giga 15250	ModuLED Giga 15220	ModuLED Giga 15250
10	1.4	1.0	14	10
20	1.3	0.9	26	18
30	1.2	0.8	36	25
40	1.2	0.8	46	31
50	1.1	0.8	55	37
60	1.1	0.7	64	43
70	-	0.7	-	49
80	-	0.7	-	55
90	-	0.7	-	61
100	-	0.7	-	66

ModuLED Giga performance data at a heat sink to ambient temperature difference, ΔT_{hs-amb} , of 50 °C



Heat sink to ambient temperature rise T_{hs-amb} (°C)

ModuLED Giga 15220 ModuLED Giga 15250



Dissipated Power P_d (W)