

MechaTronix in LED

ModuLED Mega HBG Star LED Cooler ϕ 134mm for MEAN WELL HBG Driver



Features & Benefits

- The ModuLED Mega HBG modular passive LED coolers are specifically designed for luminaires using the MEAN WELL HBG series high bay lighting LED driver. Mechanical compatibility with direct mounting of the HBG LED drivers to the LED cooler.
- For low and high bay designs from 4,000 to 10,000 lumen
- Thermal resistance range Rth 0.67 - 0.88°C/W
- Modular design with mounting holes foreseen for direct mounting of MEAN WELL HBG-60, HBG-100 LED drivers.
- Diameter 134mm - Standard height 50 / 100mm
Other heights on request
- Extruded from highly conductive aluminum



Order Information



Example : ModuLED Mega 134100-B-HBG

ModuLED Mega 134 **1** - **2** -HBG

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

ModuLED Mega HBG is designed in this way that you can mount LED modules from various manufacturers on the same LED cooler

Simple mounting with self tapping screws
Recommended screw force 6lb/in
Screws are available from MechaTronix

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ModuLED Mega HBG Star LED Cooler ø134mm for MEAN WELL HBG Driver



Product Details

Model n°	ModuLED Mega 13450-HBG	ModuLED Mega 134100-HBG
Dimension (mm) ^{*1}	ø134 x h50	ø134 x h100
Volume (mm ³)	283564	567200
Cooling Surface (mm ²)	165446	319435
Weight (gr)	766	1531
Thermal Resistance (°C/W) ^{*2}	0.88	0.67
Power Pd (W) ^{*3}	57	75
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.

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Mounting Options

The ModuLED Mega HBG 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.

For a detailed overview please see ModuLED Mega datasheet under standard products or the brand specific datasheet per LED brand.

Below you find an overview of MEAN WELL HBG series LED drivers which standard fit on the ModuLED Mega HBG LED cooler.

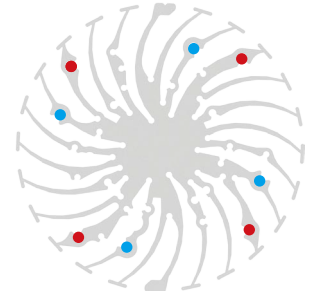
MEAN WELL HBG series LED Drivers



Established in 1982, MEAN WELL is a leading standard switching power supply manufacturers in the world. MEAN WELL currently operates under five financially independent but cooperating companies in Taiwan, China, USA and Europe. Product lines include AC/DC switching power supplies, DC/DC converters, DC/AC inverters and battery chargers. MEAN WELL have over 5,000 standard models widely used in automation, communication, LED lighting, medical, moving sign, and office automation fields.

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.



MEAN WELL HBG-60 series LED driver

Model Names

- HBG-60-1050
- HBG-60-1400
- HBG-60-2100

Mounting

- Direct mounting with 4 M5 nuts + 4 Hex socket M5 x 22mm screws
- Red indicator marks



MEAN WELL HBG-100 series LED driver

Model Names

- HBG-100-24
- HBG-100-36
- HBG-100-48
- HBG-100-60

Mounting

- Direct mounting with 4 M5 nuts + 4 Hex socket M5 x 22mm screws
- Blue indicator marks

MechaTronix in LED

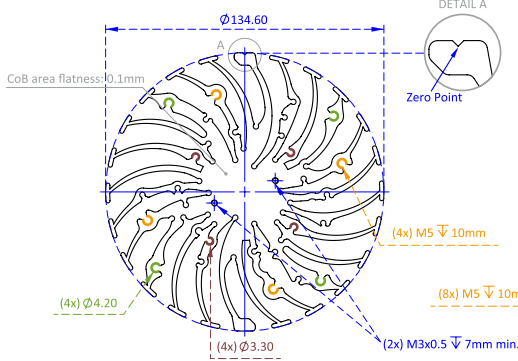
ModuLED Mega HBG Star LED Cooler $\phi 134\text{mm}$ for MEAN WELL HBG Driver



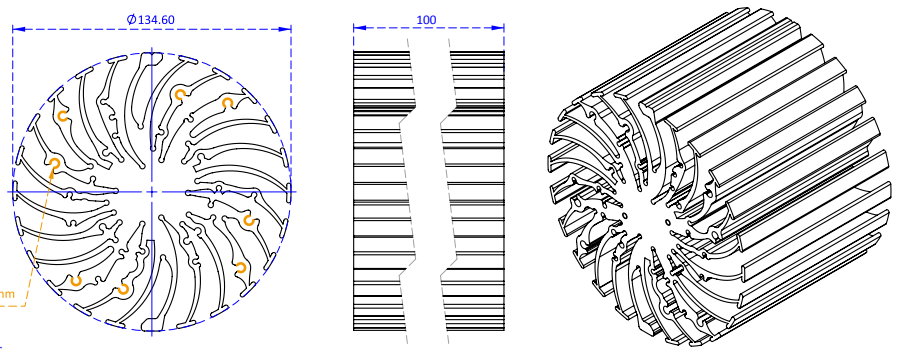
Drawings & Dimensions

Example: ModuLED Mega 134100-HBG

Front side



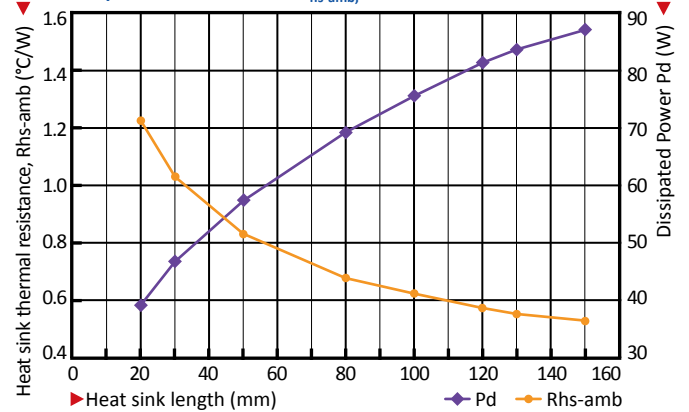
Back side



Thermal Data

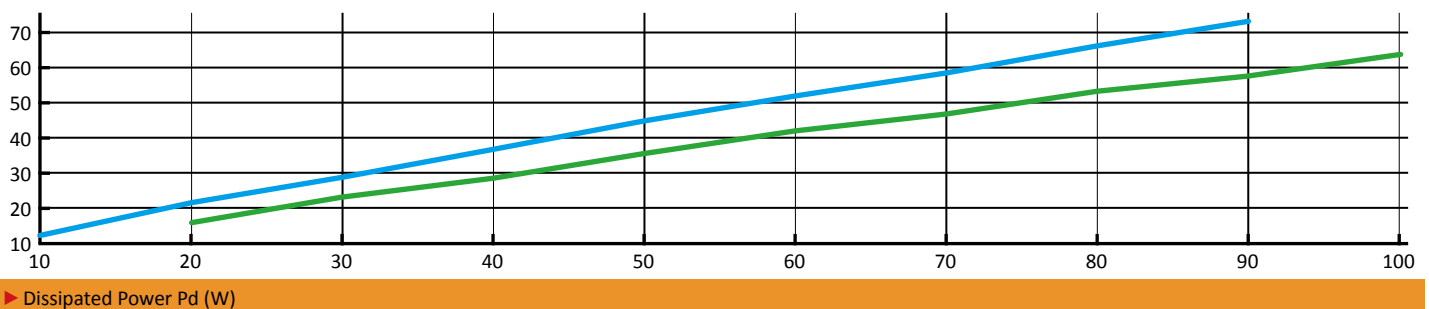
$P_d = P_e \times (1-\eta_L)$	Heat sink to ambient thermal resistance R_{hs-amb} ($^{\circ}\text{C}/\text{W}$)		Heat sink to ambient temperature rise T_{hs-amb} ($^{\circ}\text{C}$)	
	ModuLED Mega 13450-HBG	ModuLED Mega 134100-HBG	ModuLED Mega 13450-HBG	ModuLED Mega 134100-HBG
10	1.20	-	12	-
20	1.05	0.80	21	16
30	0.97	0.77	29	23
40	0.93	0.73	37	29
50	0.90	0.70	45	35
60	0.87	0.68	52	41
70	0.84	0.67	59	47
80	0.83	0.66	66	53
90	0.81	0.64	73	58
100	-	0.63	-	63

ModuLED Mega HBG 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} ($^{\circ}\text{C}$)

ModuLED Mega 13450-HBG ModuLED Mega 134100-HBG



Dissipated Power Pd (W)