

# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Features & Benefits

- The ModuLED Mega HBG modular passive LED coolers are specifically designed for Low Bay, Mid Bay and High Bay luminaries with the driver mounted on the LED cooler.
- Cooling performance 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 and driver box for various LED driver manufacturers.
- 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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## Product Details

Model n°	ModuLED Mega 13450-HBG	ModuLED Mega 134100-HBG
Dimension (mm) <sup>*1</sup>	ø134 x h50	ø134 x h100
Volume (mm <sup>3</sup> )	283564	567200
Cooling Surface (mm <sup>2</sup> )	165446	319435
Weight (gr)	766	1531
Thermal Resistance (°C/W) <sup>*2</sup>	0.88	0.67
Power Pd (W) <sup>*3</sup>	57	75
Heat Sink Material	AL6063-T5	AL6063-T5

<sup>\*1</sup> 3D files are available in ParaSolid, STP and IGS on request

<sup>\*2</sup> 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

<sup>\*3</sup> 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

$\eta_L$  = 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.

Below you find an overview of LED modules, COB's, MEAN WELL HBG series LED drivers and external driver connection options for various LED brands, which standard fit on the ModuLED Mega-HBG LED cooler.

The ModuLED Mega-HBG is probably the most complete standard High Bay LED cooler with regards to mounting possibilities of Zhaga and the latest generation of COB LED modules.

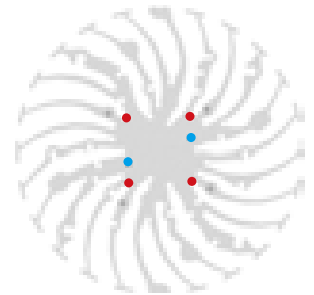
## Bridgelux LED Arrays



Bridgelux is a leading provider of high power, cost effective and energy efficient light emitting diode (LED) solutions. Leveraging patented light source technology, Bridgelux LED Arrays replace traditional technologies (such as incandescent, halogen, fluorescent and high intensity discharge lighting) with integrated solid state light sources enabling high performance and energy-efficient products for the general lighting market.

### 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.



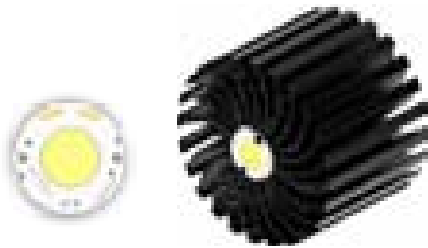
### Bridgelux Vero 18 & Décor Vero 18 LED Array

#### Model names

- Vero 18 BXRC-27x4000
- Vero 18 BXRC-30x4000
- Vero 18 BXRC-35E4000
- Vero 18 BXRC-40E4000
- Vero 18 BXRC-50C4000
- BXRC-xxA4001-F-23
- BXRC-xxH4000-F-xx
- BXRC-xxE4000-F-04
- BXRC-56G4000-F-04

#### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm
- Blue indicator marks



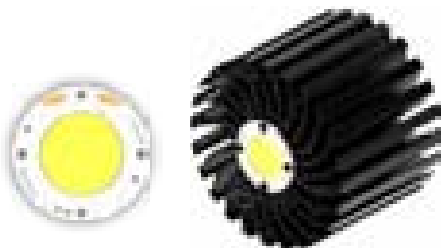
### Bridgelux Vero 29 & Décor Vero 29 LED Array

#### Model names

- Vero 29 BXRC-27x10K0
- Vero 29 BXRC-30x10K0
- Vero 29 BXRC-35E10K0
- Vero 29 BXRC-40E10K0
- Vero 29 BXRC-50C10K0
- BXRC-xxA10K1-L-23
- BXRC-56G10K0-L-04

#### Mounting

- Direct mounting with 4 self tapping screws M3 x 6mm
- Red indicator marks



# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options

### Citizen LED COB

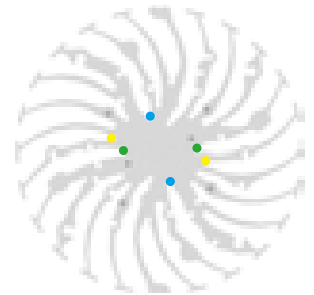
## CITIZEN

Micro HumanTech

Citizen Electronics Co., Ltd. is a precision electronics manufacturer with headquarters in Fujiyoshida City, Yamanash Japan. Prefecture and a subsidiary of Citizen Holdings Co., Ltd. Citizen Electronics is a leader in LED light sources for electronic devices and high power white LED lamps. The second generation CITED CLL LED COB modules and the new upcoming generation CLU distinguish themselves through the combination of high lumen per watt performance combined with a perfect light quality control.

### 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.



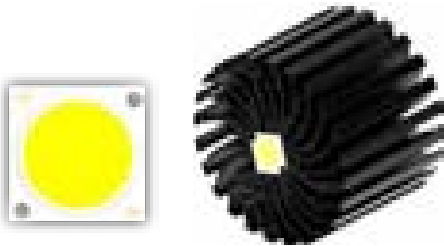
### Citizen Cited CLL042 - CLU044 - CLU046

#### Model names

- CLL042-xxxx
- CLU044-xxxx
- CLU046-1212C1
- CLU046-1812C1
- CLU046-1818C1

#### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Blue indicator marks
- With Zhaga Book 3 LED holder  
BJB spotlight connector 47.319.2030  
Ideal Industries Chip-Lok™ holder 50-2204CT  
Mounting with 2 self tapping screws M3 x 6mm  
Green indicator marks



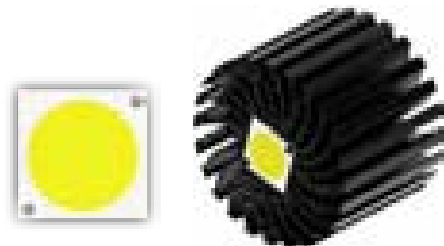
### Citizen Cited CLL052 - CLU054 - CLU056

#### Model names

- CLL052-xxxx
- CLU054-xxxx
- CLU056-1825C1

#### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Yellow indicator marks



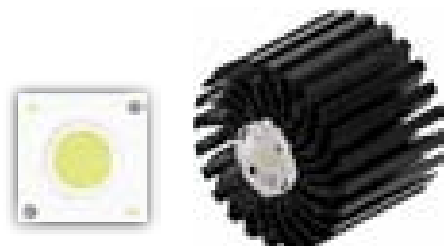
### Citizen Cited High Intensity Type CLU730

#### Model names

- CLU730-1210B8

#### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Blue indicator marks
- With Zhaga Book 3 LED holder  
BJB spotlight connector 47.319.2030  
Ideal Industries Chip-Lok™ holder 50-2204CT  
Mounting with 2 self tapping screws M3 x 6mm  
Green indicator marks



# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options

### Cree XLamp LED Array

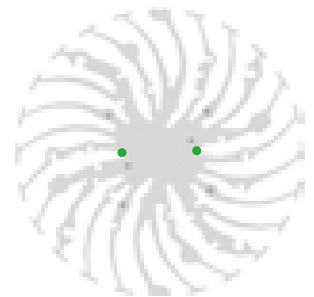


Cree XLamp® LEDs deliver the industry's best lighting-class performance and are application-optimized to enable the lowest system cost.

Cree's new CXA LED Arrays deliver high lumen output and efficacy in a family of single, easy-to-use components. Optimized to simplify designs and lower system cost, Cree's CXA LED arrays are available in system level performance from 300 to over 16,000 lumens and can enable applications ranging from GU10s and commercial downlights to outdoor area lighting and high-bay lighting.

#### 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.



#### Cree XLamp CXA25 / CXB25 LED Array



##### Model names

- CXA2520-xxxx
- CXA2530-xxxx
- CXB2530-xxxx
- CXA2540-xxxx
- CXB2540-xxxx
- CXA2590-xxxx

##### Mounting

- With Zhaga Book 3 LED holder
  - BJB Spotlight connector 47.319.2141
  - Ideal Industries Chip-Lok™ holder 50-2102CR
  - TE Connectivity Lumawise type Z50 2213407-1
  - TE Connectivity Lumawise type Z50 2213407-2
- Mounting with 2 self tapping screws M3 x 8mm
- Green indicator marks

#### Cree XLamp CXA30 / CXB30 LED Array



##### Model names

- CXA3050-xxxx
- CXB3050-xxxx
- CXA3070-xxxx
- CXB3070-xxxx

##### Mounting

- With Zhaga Book 3 LED holder
  - BJB Spotlight connector 47.319.2151
  - Ideal Industries Chip-Lok™ holder 50-2234C
- Mounting with 2 self tapping screws M3 x 8mm
- Green indicator marks

# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options

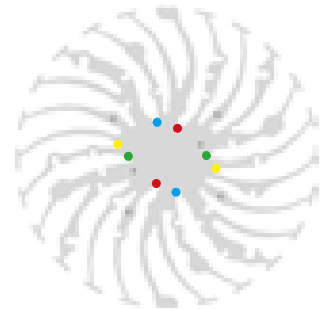
### Edison Opto LED Modules and COB's



Edison Opto with headquarters in Chung-Ho Dist, New Taipei City, Taiwan is a professional LED manufacture with specialties in designing and producing High-power LEDs, solid state lighting applications, LED sensors and SPDIFs. In response to rapid growth of capacity demand, Edison Opto has established factories in Dongguan and Yangzhou China and subsidiaries in USA and Germany. Edison Opto COB LED modules outstand in light quality and are available in the broadest lumen and CRI range available on the market.

#### 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.



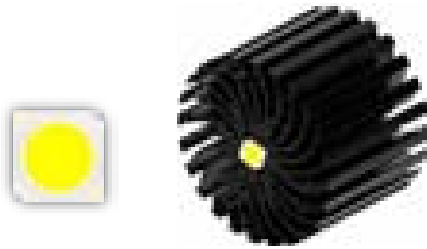
#### Edison Opto EdiPower II & EdiPower III HM series

##### Model Names 24W - 30W

- 2PHM24xxxx
- 2PHM30xxxx

##### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Red indicator marks
- With Zhaga Book 3 LED holder  
BJB Spotlight connector 47.319.2021  
Ideal Industries Chip-Lok™ holder 50-2103CT  
TE Connectivity Lumawise type Z50 2213254-1  
TE Connectivity Lumawise type Z50 2213254-2  
Mounting with 2 self tapping screws M3 x 6mm  
Green indicator marks

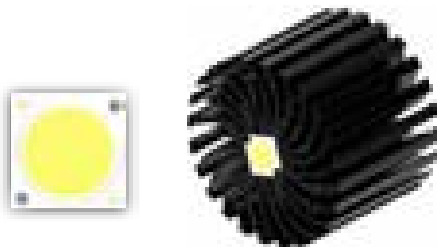


##### Model Names 40W

- 2PHM40xxxx

##### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Blue indicator marks
- With Zhaga Book 3 LED holder  
BJB spotlight connector 47.319.2030  
Ideal Industries Chip-Lok™ holder 50-2204CT  
Mounting with 2 self tapping screws M3 x 6mm  
Green indicator marks



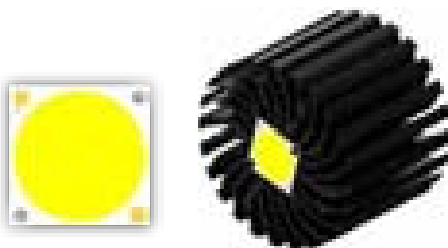
#### Edison Opto EdiPower III HM High Power series

##### Model names

- 2PHMA2xW27P29xxx

##### Mounting

- Direct mounting with 2 self tapping screws M3 x 10mm  
Yellow indicator marks



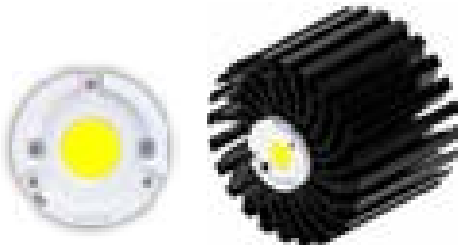


# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options



### Edison Opto EdiLex Spot Light Module (SLM)

#### Model Names

- 5PHR22xxxx
- 5PHV35xxxx

#### Mounting

- Direct mounting with 2 self tapping screws M3 x 10mm
- Green indicator marks

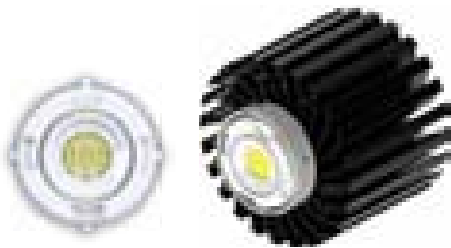
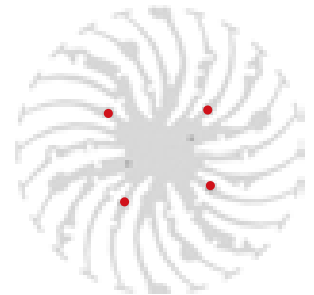
## GE Lighting LED Modules



GE Infusion™ is a game-changing technology and one of the most flexible LED lighting solutions on the market. As a designer, OEM or end-users, you can choose from an extensive selection of modules. Plus, there's the assurance of GE reliability and performance.

### 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.



### Infusion M-series Spot Light Modules

#### Model names

- Infusion M3000 series
- Infusion M4500 series

#### Mounting

- Twist and lock LED engine
- Mounting with GE LED collar by 4 self tapping screws M4 x 6mm or 8mm
- Red indicator marks



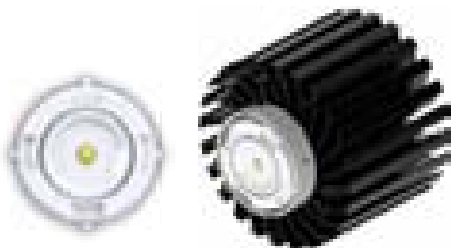
### Infusion DLM-series Down Light Modules

#### Model names

- Infusion DLM3000 series
- Infusion DLM4000 series

#### Mounting

- Twist and lock LED engine
- Mounting with GE LED collar by 4 self tapping screws M4 x 6mm or 8mm
- Red indicator marks



### Infusion NPM-series Narrow Punch Modules

#### Model names

- MP30/827/W/N
- MP30/830/W/N
- MP30/930/W/N
- MP30/840/W/N

#### Mounting

- Twist and lock LED engine
- Mounting with GE LED collar by 4 self tapping screws M4 x 6mm or 8mm
- Red indicator marks

# MechaTronix in LED

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## Mounting Options

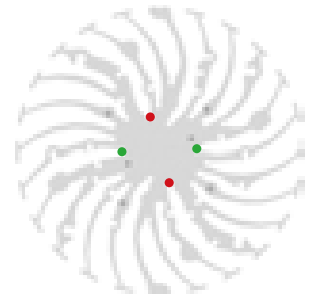
### LG Innotek LED COB



LG Innotek is a global specialized material and component manufacturer who is making a better world through cutting edge core component technology that is leading the market and opening a smarter future through the development of new eco-friendly materials. With the world's highest production capacity as a single-factory and a solid LED business base built over more than a decade, LG Innotek's Paju LED factory produces 2 billion chips a month. Their LEMWM COB LED modules deliver a perfect lumen per watt ratio in an uncompromised lighting quality.

#### 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.



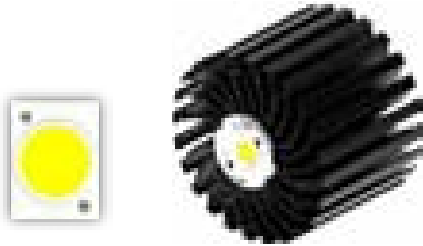
#### LG LEMWM18 17W/24W COB

##### Model names

- LEMWM18780xxxx
- LEMWM18880xxxx

##### Mounting

- With Zhaga Book 3 LED holder  
BJB Spotlight connector 47.319.2080  
Ideal Industries Chip-Lok™ holder 50-2100LG  
Mounting with 2 self tapping screws M3 x 8mm  
Green indicator marks



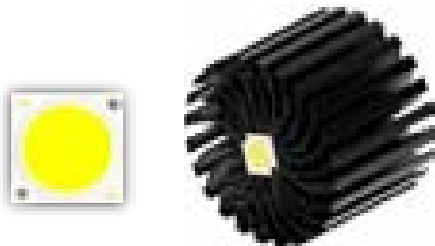
#### LG LEMWM28 COB

##### Model names

- LEMWM28xxxx

##### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Red indicator marks
- With Zhaga Book 3 LED holder  
BJB Spotlight connector 47.319.2030  
Ideal Industries Chip-Lok™ holder 50-2204CT  
Mounting with 2 self tapping screws M3 x 8mm  
Green indicator marks





# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options

### Lumileds LED Array & COB

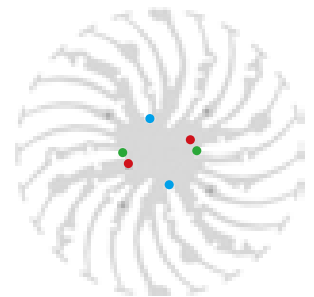


The Brighter Choice

Lumileds LUXEON COB is a new breakthrough in efficacy for arrays. Due to its industry leading small Light Emitting Surfaces (LES), the COB array is very easy work with and will enable easier and less expensive designs. All LUXEON COBs are available in a single 3-step as well as a single 5-step MacAdam Ellipse, ensuring uniform optical performance in the application. Ideal applications include down lights and directional lamps.

#### 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.



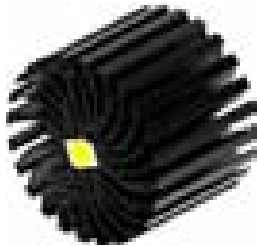
#### Luxeon COB 1205 - 1208

##### Model names

- Luxeon COB LHC1-xxxx-1205
- Luxeon COB LHC1-xxxx-1208

##### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Red indicator marks
- With Zhaga Book 3 LED holder  
BJB spotlight connector 47.319.2011  
Ideal Industries Chip-Lok™ holder 50-2100SH  
TE Connectivity Lumawise type Z50 2213130-1  
TE Connectivity Lumawise type Z50 2213130-2  
Mounting with 2 self tapping screws M3 x 8mm  
Green indicator marks



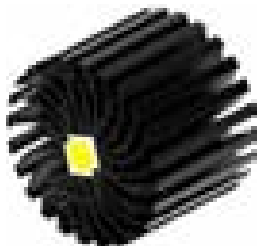
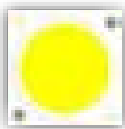
#### Luxeon COB 1211

##### Model names

- Luxeon COB LHC1-xxxx-1211

##### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Blue indicator marks
- With Zhaga Book 3 LED holder  
BJB spotlight connector 47.319.2030  
Ideal Industries Chip-Lok™ holder 50-2204CT  
Mounting with 2 self tapping screws M3 x 8mm  
Green indicator marks



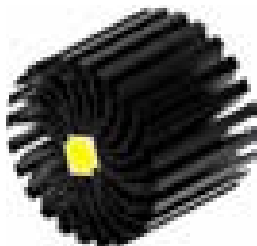
#### Luxeon COB 1216

##### Model names

- Luxeon COB LHC1-xxxx-1216

##### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Blue indicator marks
- With Zhaga Book 3 LED holder  
BJB spotlight connector 47.319.2030  
Ideal Industries Chip-Lok™ holder 50-2204CT  
Mounting with 2 self tapping screws M3 x 8mm  
Green indicator marks



# MechaTronix in LED

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## Mounting Options

### Lustrous LED COB

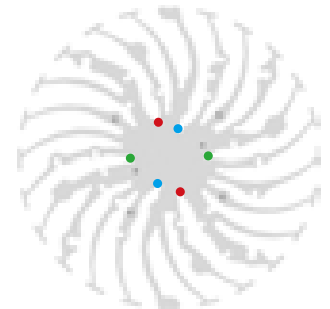
## LUSTROUS

Green Technology of Lighting

LUSTROUS unique Chip-on-Board (COB) packaging technology of High Power LED leads the core competence of LUSTROUS. COB packaging technology shows excellent thermal management and high efficiency performance. One of the benefits of COB is bright, uniform light output. The excellent low thermal resistance is achieved through state of the art COB technology on highly conductive substrates. This enables low junction temperatures at chip level for much higher efficiencies.

### 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.



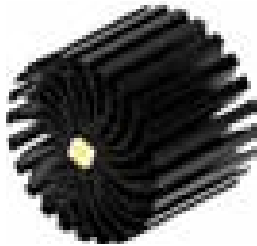
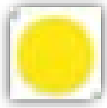
### Lustrous Lustron LL613F - LL620F LED COB

#### Model names

- Lustron LL613F1206-xxx
- Lustron LL620F1208-xxx

#### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Red indicator marks
- With Zhaga Book 3 LED holder  
BJB spotlight connector 47.319.2021  
Ideal Industries Chip-Lok™ holder 50-2103CT  
Mounting with 2 self tapping screws M3 x 8mm  
Green indicator marks



### Lustrous Lustron LL660D LED COB

#### Model names

- Lustron LL660D1210-xxx

#### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Blue indicator marks
- With Zhaga Book 3 LED holder  
BJB spotlight connector 47.319.2030  
Ideal Industries Chip-Lok™ holder 50-2204CT  
Mounting with 2 self tapping screws M3 x 8mm  
Green indicator marks



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ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options

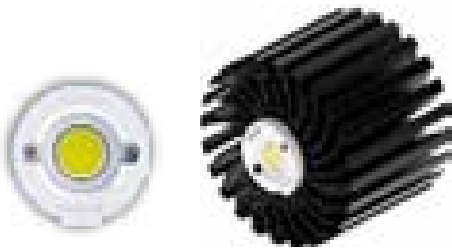
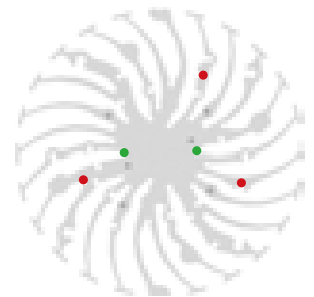
### Osram PrevaLED LED Modules



With the PrevaLED Core and PrevaLED Core AC, Osram leads the path of versatile LED light modules interchangeable according Zhaga book 3 specifications. With an initial color binning below 3 steps Mc Adam, a wide range of lumen packages from 1.100lm all the way up to 5.000lm and a broad availability of color temperatures, the Osram PrevaLED Core found it's strive in high-end shop and down light applications with an uncompromised lighting quality.

#### 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.



#### Osram PrevaLED Core Z3

##### Model names

- PL-CORE-3000-xxx-Z3
- PL-CORE-5000-xxx-Z3

##### Mounting

- Direct mounting with 2 self tapping screws M3 x 10mm
- Green indicator marks



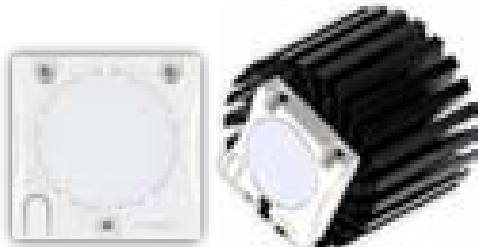
#### Osram PrevaLED Core Z4

##### Model names

- PL-CORE-Z4-4500-xxx
- PL-CORE-Z4-5000-xxx

##### Mounting

- Direct mounting with 2 self tapping screws M3 x 10mm
- Green indicator marks



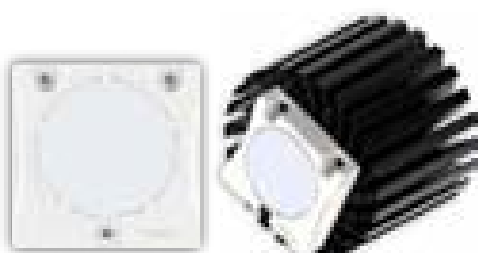
#### Osram PrevaLED Cube G2

##### Model names

- PL-CUBE-2000-xxx-0.5A-G2
- PL-CUBE-3000-xxx-0.7A-G2

##### Mounting

- Direct mounting with 3 self tapping screws M3 x 10mm
- Red indicator marks



#### Osram PrevaLED Cube AC

##### Model names

- PL-CUBE-AC-2000-xxx-G2
- PL-CUBE-AC-3000-xxx-G2

##### Mounting

- Direct mounting with 3 self tapping screws M3 x 10mm
- Red indicator marks

# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options

### Osram Opto Semiconductors LED COB

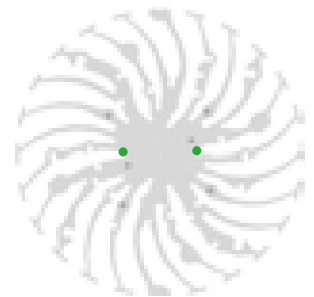
**OSRAM**

Opto Semiconductors

Osram SOLERIQ® LEDs are designed to meet the requirements of professional indoor general lighting applications. Large flux output, small light emitting surfaces, variation, CRI greater than 80 and easy to use Chip-on-Board technology support easy and creative lighting design. These properties make SOLERIQ® LED COB modules a high efficient, high-quality and price-performance-optimized solution for all demanding and at the same time cost-conscious lighting manufactures and designers.

#### 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.



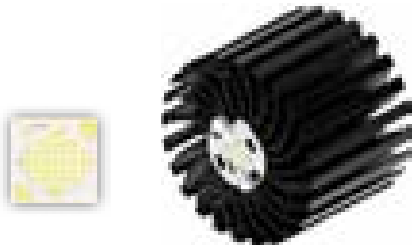
#### Osram Soleriq P13 LED COB

##### Model names

- GW MAGMB1.EM
- GW MAGMB1.CM

##### Mounting

- With Zhaga Book 3 LED holder  
Ideal Industries Chip-Lok™ holder 50-2101CR  
Mounting with 2 self tapping screws M3 x 8mm  
Green indicator marks



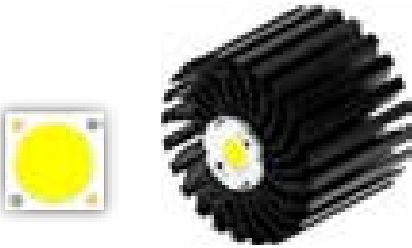
#### Osram Soleriq S19 LED COB

##### Model names

- GW-KAHLB1-xxxx

##### Mounting

- With Zhaga Book 3 LED holder  
BJB spotlight connector 47.319.2170  
TE Connectivity Lumawise type Z50 2213407-1  
TE Connectivity Lumawise type Z50 2213407-2  
Mounting with 2 self tapping screws M3 x 8mm  
Green indicator marks



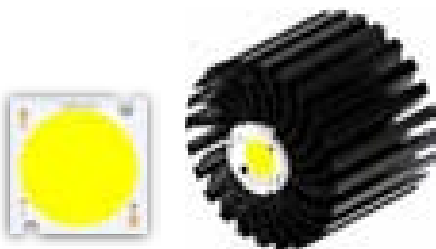
#### Osram Soleriq E30 LED COB

##### Model names

- GW KAJRB2.EM-STTQ->xxxx
- GW KAJRB2.EM-TPTR->xxxx

##### Mounting

- With Zhaga Book 3 LED holder  
BJB spotlight connector 47.319.2090  
Mounting with 2 self tapping screws M3 x 8mm  
Green indicator marks



# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options

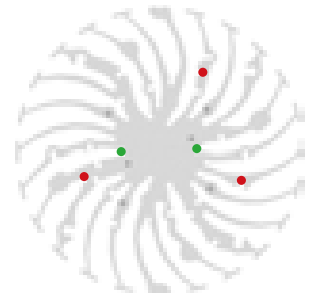
### Philips LED Modules

# PHILIPS

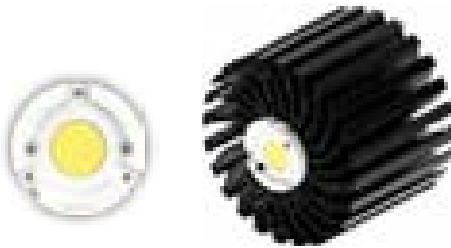
The third Philips Fortimo LED SLM generation is the ideal solution for spot lighting fixtures and highly efficient compact down light luminaires. It is specifically designed for the retail market showcasing retail merchandise in bright and vivid light. This generation is equipped with new Chip-On-Board (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 / GEN4 LED Modules



##### Model names

- Fortimo LED SLM 4000 G3
- Fortimo LED SLM 4500 G3
- Fortimo LED SLM 4500 G4

##### Mounting

- Direct mounting with 2 self tapping 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 Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options

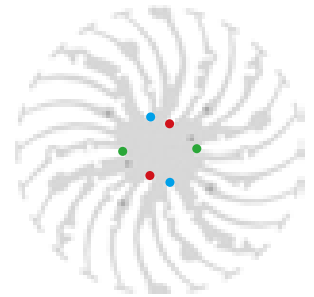
### Prolight Opto LED COB's



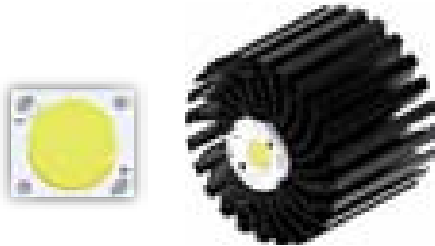
Founded in October 2004, Prolight Opto Technology Corporation is a professional manufacturer of LED packaging, dedicated to the research, development, and manufacturing of mid-to-high-power, high reliability LED packages. Prolight Opto continually invests over 6% of sales revenue in R&D and patents. With own package patents from the US and Taiwan they insure a wide range of LED emitters in the smallest foot prints and COB LED modules with perfect thermal management and high density lumen output.

#### 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.



#### Prolight Opto BI series PABA COB



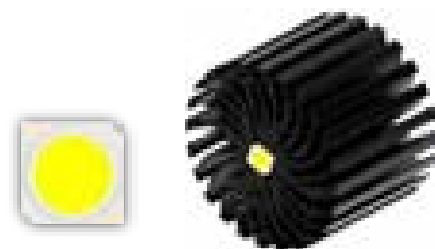
##### Model names

- PABA-50xxx-xxxx

##### Mounting

- With Zhaga Book 3 LED holder  
BJB spotlight connector 47.319.2040  
Mounting with 2 self tapping screws M3 x 6mm  
Green indicator marks

#### Prolight Opto CF series PACF COB



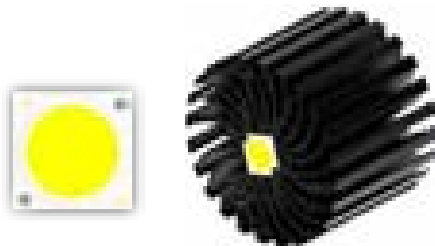
##### Model names

- PACF-57xxx-xxxx

##### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Red indicator marks
- With Zhaga Book 3 LED holder  
BJB Spotlight connector 47.319.2021  
TE Connectivity Lumawise type Z50 2213254-1  
TE Connectivity Lumawise type Z50 2213254-2  
Mounting with 2 self tapping screws M3 x 6mm  
Green indicator marks

#### Prolight Opto CG series PACG COB



##### Model names

- PACG-110xxx-xxxx

##### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Blue indicator marks
- With Zhaga Book 3 LED holder  
BJB spotlight connector 47.319.2030  
Mounting with 2 self tapping screws M3 x 6mm  
Green indicator marks

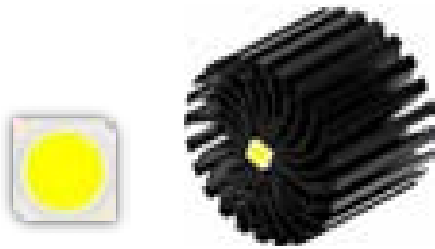


# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options



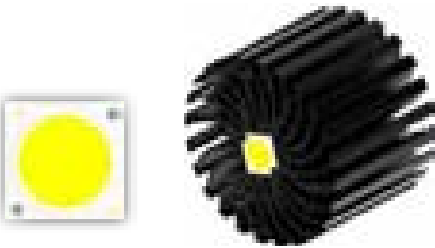
### Prolight Opto CII series PACC COB

#### Model names

- PACC-18xxx-xxxx

#### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Red indicator marks
- With Zhaga Book 3 LED holder  
BJB Spotlight connector 47.319.2021  
TE Connectivity Lumawise type Z50 2213254-1  
TE Connectivity Lumawise type Z50 2213254-2  
Mounting with 2 self tapping screws M3 x 6mm  
Green indicator marks



### Prolight Opto CIII series PACD COB

#### Model names

- PACD-40xxx-xxxx

#### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm  
Blue indicator marks
- With Zhaga Book 3 LED holder  
BJB spotlight connector 47.319.2030  
Mounting with 2 self tapping screws M3 x 6mm  
Green indicator marks

## Seoul Semiconductor LED COB

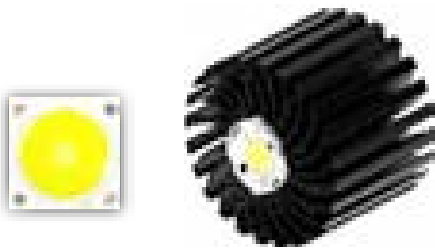
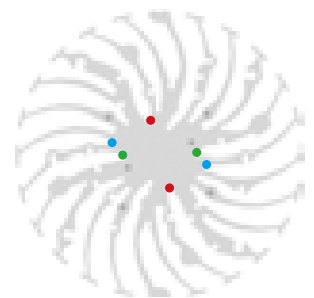


SEOUL SEMICONDUCTOR

The new Seoul Semiconductor ZC series Chip-On-Board (COB) LED Arrays offer high lumen density and efficacies of up to 140lm/W in a single, easy-to-use LED component family. Available in all major color temperatures from 2700K up to 6000K, these high flux packages deliver system level performance of 700 lumens to over 6,000 lumens. The new ZC series family is available in a single 3-step MacAdam Ellipse binning, ensuring excellent color consistency with minimum CRI options of 70, and 80 combining high quality of light with high efficacy.

### 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.



### Seoul Semiconductor ZC 40 / ZC 60 LED COB

#### Model names

- SDW05F1C
- SDW85F1C
- SDW95F1C
- SDW06F1C
- SDW86F1C
- SDW96F1C

#### Mounting

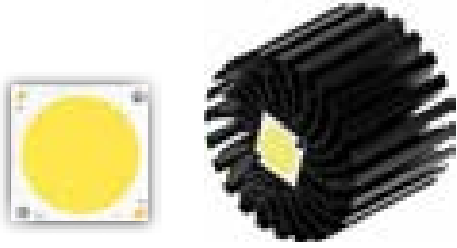
- Direct mounting with 2 self tapping screws M3 x 6mm  
Red indicator marks
- With Zhaga Book 3 LED holder  
BJB spotlight connector 47.319.2030  
Ideal Industries Chip-Lok™ holder 50-2204CT  
Mounting with 2 self tapping screws M3 x 6mm  
Green indicator marks

# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options



### Seoul Semiconductor ZC 100 LED COB

#### Model names

- SDW07F1C
- SDW87F1C
- SDW97F1C

#### Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm
- Blue indicator marks

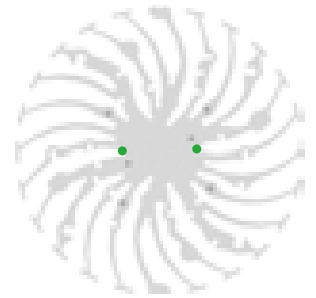
## Sharp LED Modules & COB

# SHARP

Sharp Zenigata Chip on Board (COB) technology leverages 40 years of LED expertise to help your products outshine the competition with some of the highest brightness-per-watt in the industry. Sharp's new Mega Zenigata 50W – 80W modules take traditional, high-power lighting applications head on with power-saving LED alternatives. Sharp Devices Europe has launched an important new portfolio of LED modules dubbed INTERMO. The Standard INTERMO is a Zhaga Book 3 form-factor module, which ensures compatibility with a large eco-system of third-party products.

### 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.



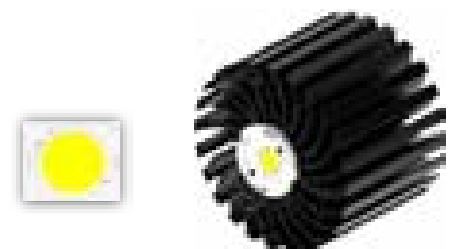
### Sharp INTERMO Standard / Slim LED Modules

#### Model names

- GW7MMCxxGZC - 3000 lm
- GW7MGDxxGZC - 3000 lm
- GW7MMDxxGZC - 4000 lm
- GW7MGExxGZC - 4000 lm
- GW7MMExxGZC - 5000 lm

#### Mounting

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



### Sharp Mega Zenigata 25-40W / 35-50W / 50-80W LED COB

#### Model names

- GW5DxCxxM04
- GW6DxCxxNFC
- GW6DxDxxNFC
- GW5DxExxMR5
- GW6DxExxNFC

#### Mounting

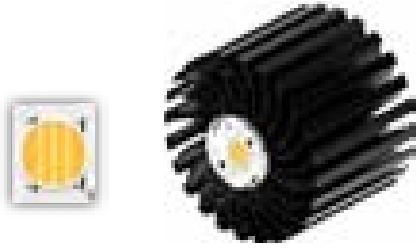
- With Zhaga Book 3 LED holder
- BJB spotlight connector 47.319.2011
- Ideal Industries Chip-Lok™ holder 50-2100SH
- Mounting with 2 self tapping screws M3 x 6mm
- Green indicator marks

# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options



### Sharp Tiger Zenigata 25W LED COB

#### Model names

- GW6TGCBG40C

#### Mounting

- With Zhaga Book 3 LED holder
- BJB spotlight connector 47.319.2051
- Mounting with 2 self tapping screws M3 x 6mm
- Green indicator marks

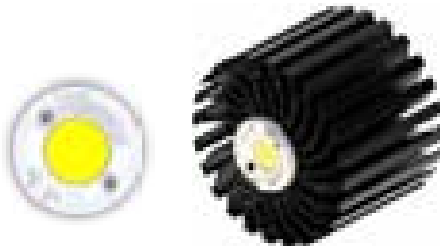
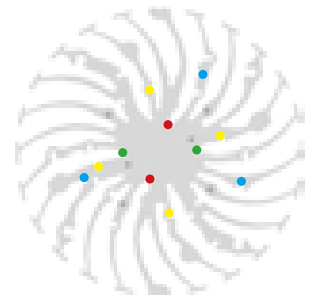
## Tridonic LED Modules and COB



With the TALEXX LED products Tridonic gives you the confidence that your chosen lighting solution will give you precisely the results you want. Thanks to Tridonic's many years of experience in product development they have been able to raise the quality of light from their LEDs to new levels. The production series have an exceptionally constant light color so they guarantee a uniform and crystal clear color appearance. In addition to high efficiency and balanced distribution of light Tridonic offers you impressive robustness in the latest generation of their products and the resultant long life will save you maintenance and repair costs.

### 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.



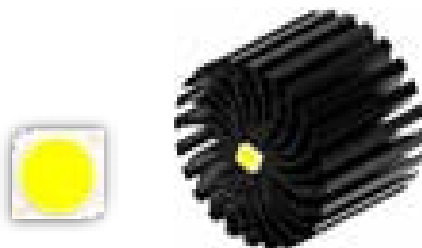
### TALEXX Stark SLE GEN3 19 & 23 Select / Classic / Food / Art

#### Model names

- STARK-SLE-G3-19-xxx
- STARK-SLE-G3-23-xxx

#### Mounting

- Direct mounting with 2 self tapping screws M3 x 8mm
- Green indicator marks



### TALEXX Stark SLE GEN3 Mini LES-17 Select / Classic

#### Model names

- STARK-SLE-PURE-G3-17-xxx

#### Mounting

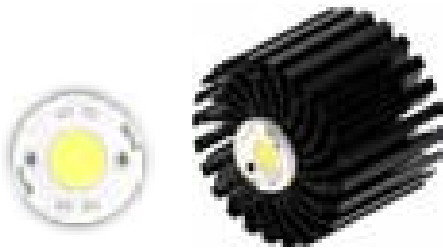
- Direct mounting with 2 self tapping screws M3 x 8mm
- Red indicator marks
- With Zhaga Book 3 LED holder
- BJB Spotlight connector 47.319.2021
- Mounting with 2 self tapping screws M3 x 8mm
- Green indicator marks

# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options



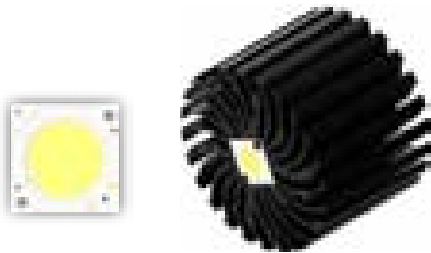
### TALEXxmodule SLE GEN4 19mm & 23mm Excite / Advanced

#### Model names

- SLE G4 19mm 3000lm xxx x EXC/ADV
- SLE G4 23mm 5000lm xxx x EXC/ADV

#### Mounting

- Direct mounting with 2 self tapping screws M3 x 8mm  
Green indicator marks



### TALEXxmodule SLE GEN4 23mm Essence

#### Model names

- SLE G4 23mm 5000lm xxx R SNC

#### Mounting

- Direct mounting with 2 self tapping screws M3 x 8mm  
Green indicator marks



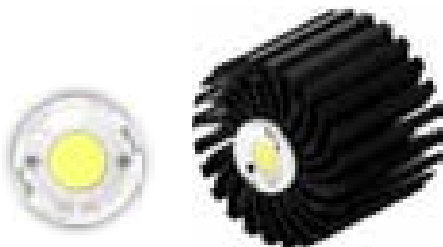
### TALEXxmodule SLE GEN5 15mm Excite / Advanced

#### Model names

- SLE G5 15mm 4000lm xxx x EXC/ADV
- SLE G5 15mm 5000lm xxx x EXC/ADV

#### Mounting

- With Zhaga Book 3 LED holder  
BJB Spotlight connector 47.319.2021  
Ideal Industries Chip-Lok™ holder 50-2103CT  
TE Connectivity Lumawise type Z50 2213254-1  
TE Connectivity Lumawise type Z50 2213254-2  
Mounting with 2 self tapping screws M3 x 8mm  
Green indicator marks



### TALEXxmodule SLE GEN5 19mm & 23mm Excite / Advanced

#### Model names

- SLE G5 19mm 5000lm xxx x EXC/ADV
- SLE G5 23mm 6000lm xxx x EXC/ADV

#### Mounting

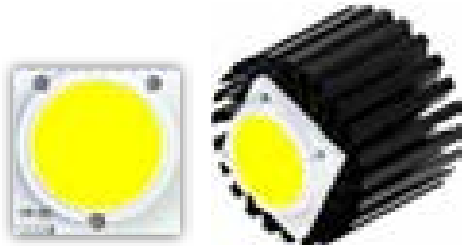
- Direct mounting with 2 self tapping screws M3 x 8mm  
Green indicator marks

# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options



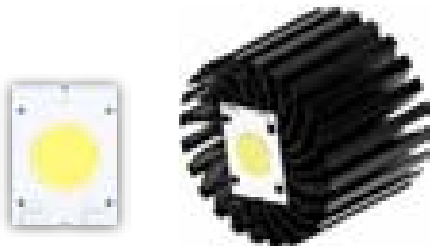
### TALEXX Stark DLE GEN2 & TALEXXmodule DLE GEN3

#### Model names

- STARK DLE GEN2 CLASSIC - 2000
- STARK DLE GEN2 CLASSIC - 3000
- DLE-G2-LES65-1100-XXX-AC
- DLE-G2-LES65-2000-XXX-AC
- DLE G3 65mm 2000lm xxx x EXC
- DLE G3 65mm 3000lm xxx x EXC
- DLE G3 65mm 2000lm xxx x ADV
- DLE G3 65mm 3000lm xxx x ADV

#### Mounting

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



### TALEXXmodule Stark FLE GEN1

#### Model names

- STARK-FLE-G1-30-xxx
- STARK-FLE-G1-40-xxx

#### Mounting

- Direct mounting with 4 self tapping screws M3 x 6mm
- Yellow indicator marks

# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options

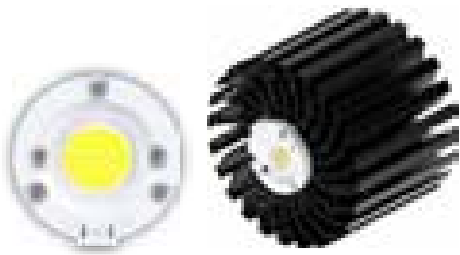
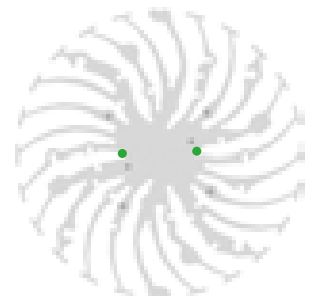
### Vossloh Schwabe LED Modules



Vossloh-Schwabe is an independent brand within the Panasonic Group responsible for the global development of the business area "Components for light technology". Panasonic employs 367,000 members of staff with an annual turnover of 76.75 billion Euros (8692.7 billion yen) and is represented throughout the world by more than 634 companies or representations in Asia, America and Europe. The Vossloh Schwabe Luga Shop LED modules are ideal solution for high-end luminaire designs where quality stands at the first place.

#### 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.



#### Luga Shop 2014 LED modules

##### Model names

- WU-M-484 / WU-M-461
- WU-M-485 / WU-M-462
- WU-M-486 / WU-M-464

##### Mounting

- Direct mounting with 2 self tapping screws M3 x 10mm
- Green indicator marks



#### Luga Shop 2014 Kit LED COB

##### Model names

- DMS128
- DMS158

##### Mounting

- With Luga Shop Kit holder
- Mounting with 2 self tapping screws M3 x 6mm
- Green indicator marks



# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options

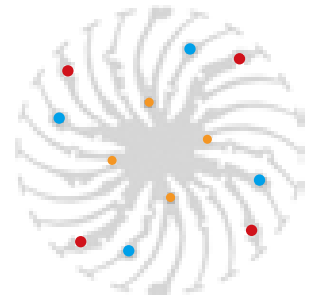
### MEAN WELL HBG series LED Drivers



The Mean Well HBG LED drivers are specifically developed for mid bay and high bay applications. The round shape of the HBG LED drivers gives an ergonomic fitting with the ModuLED high bay cooler. Thermally this driver is specifically designed to sit on top of a LED cooler, with the critical components thermally coupled to the top of the driver so free air convection can be optimal. In combination with the MechaTronix ModuLED Mega HBG this makes your ideal LED engine up to 10,000 lumen.

#### Mounting indicator marks overview

Keep in mind to keep a gap at least 10mm between the LED cooler and the driver to allow free air convection - this can be obtained with spacers or with the MTX dedicated mounting options.



#### MEAN WELL HBG-60 series LED driver

##### Model Names

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

##### Driver mounting

- Direct mounting with 4 spacers + (4x) M5 screws  
keep minimal 10mm gap between the LED cooler  
Red indicator marks
- With Connector set for HBG-60 + (4x) M5 x 30mm screws  
Red indicator marks

##### Model Names

- Connector set for HBG-60

##### Connector set mounting

- Direct mounting on the LED cooler with 4 screws M5 x 12mm  
Orange indicator marks



#### MEAN WELL HBG-100 series LED driver

##### Model Names

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

##### Driver mounting

- Direct mounting with 4 spacers + (4x) M5 screws  
keep minimal 10mm gap between the LED cooler  
Blue indicator marks
- With Connector set for HBG-100 + (4x) M5 x 30mm screws  
Blue indicator marks

##### Model Names

- Connector set for HBG-100

##### Connector set mounting

- Direct mounting on the LED cooler with 4 screws M5 x 12mm  
Orange indicator marks

# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options

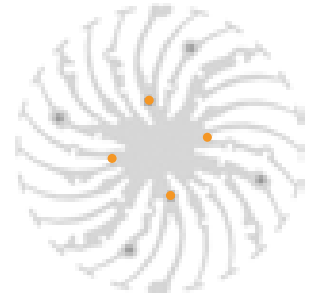
### External driver box connection option



MechaTronix was formed in 2007, comprised of five already successful manufacturing companies, with each of them in excess of a decade of continuous operation. MechaTronix provides a wide variety of mechanical and electromechanical parts as well as assemblies for the international Original Equipment Manufacturers market.

#### Mounting indicator marks overview

The CoolBox driver box design keeps automatically the necessary space towards the LED cooler, so free air convection will not be blocked - no extra spacer needed.



#### MechaTronix driver box

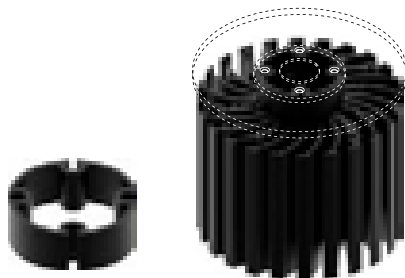
This universal driver box is designed in this way that almost all drivers available in the market up to 160 Watt can be mounted inside without the need of drilling or mechanical adaptations. The universal drivers clamping fixation also creates the perfect locking of your driver towards the top shell, so conduction can easily occur and convection towards the outside will guarantee the driver to keep within temperature specs.

##### Model Names

- CoolBox  
Universal driver box for ModuLED and CoolBay® high bay LED coolers

##### Mounting

- Direct mounting on the LED cooler with 4 screws M5 x 10mm  
Orange indicator marks



#### MechaTronix driver box connector ring

The driver box connector ring guarantees you the ideal space between the ModuLED LED cooler and your external driver box. With its open structure and aluminium conductivity, this is the ideal bridge between any driver box in the market and our high bay coolers.

##### Model Names

- Driver box connector ring

##### Mounting

- Direct mounting on the LED cooler with 4 screws M5 x 30mm  
Orange indicator marks

# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler ø134mm with driver connection system



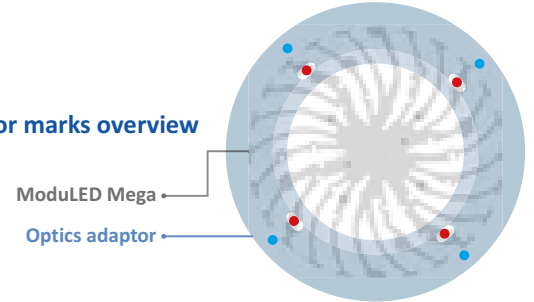
## Mounting Options

### MechaTronix High Bay LED accessories



With regards to reflectors we have equipped our high bay the most common high bay reflector standard, the 143mm pitch. For the lenses the standard mounting pattern is foreseen for all 100mm lenses with or without rubber gasket. Although we don't produce our own lenses and reflectors, we keep a limited number of models from stock available for your urgent needs. Below you can find an overview of these models as well as the mounting patterns which go along.

#### Mounting indicator marks overview



#### Adaptor plate for connection of reflector & lens

With the ModuLED Mega optics adaptor you get an unprecedented flexibility in choices of optics. Equipping your high bays with a wide variety of reflectors in metal or plastic, adding lenses for a controlled light image,... it all becomes plug-and-play.

##### Model Names

- ModuLED Mega optics adaptor

##### Mounting

- Direct mounting on the LED cooler with 4 MTX screws M5 x 9mm
- Red indicator marks

#### CoolBay® Lens

A wide variety of diameter 100mm lenses made out of glass with beam angles 60 degrees, 90 degrees or 120 degrees - Comes together with a high quality rubber gasket. Plastic varieties in clear and milk colored are also available on request.

##### Model names

- CoolBay® Lens 60
- CoolBay® Lens 90
- CoolBay® Lens 120

##### Mounting

- With optics adaptor + (4x) MTX screws M5 x 9mm
- Red indicator marks



#### Dust Protection Plate

When you are using lenses on the ModuLED high bay coolers, the open structure of the cooling fins might lead to dust accumulation in the lens. To avoid this MechaTronix has developed a range of dust protection plates (DPP) which go along with various COB sizes and LED holders. This option is of course not needed when you equip your high bay with a reflector only.

**Example** DPP-Mega-2828-01 :

28mm x 28mm COB, Cable hole position for HBG-60 LED driver

DPP-Mega- **1** - **2**

**1** COB dimension (mm)

**2** MW HBG driver cable hole position  
01 - for MW HBG-60  
02 - for MW HBG-100

##### Model Names

- DPP-Mega-2828-01
- DPP-Mega-2828-02
- DPP-Mega-3838-01
- DPP-Mega-3838-02
- DPP-Mega-ZHAGA3-01
- DPP-Mega-ZHAGA3-02

##### Mounting

- Direct mounting on the LED cooler with 4 MTX screws M5 x 9mm
- Red indicator marks

# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi$ 134mm with driver connection system



## Mounting Options



### CoolBay® Reflector

A limited range of high-end off-the-shelf available high bay reflectors in high transfective coated aluminium or polycarbonate. All our reflectors follow the most common mounting standard with a pitch of 143mm and can be fixed with the ModuLED Mega optics adaptor towards the LED cooler. All our reflectors are transported in a special adapted packaging for damage prevention.

#### Model names

- CoolBay® Reflector 45
- CoolBay® Reflector 45 PC
- CoolBay® Reflector 90
- CoolBay® Reflector 120

#### Mounting

- Direct mounting on optics adaptor with 4 screws M5 x 6mm  
Blue indicator marks

# MechaTronix in LED

ModuLED Mega-HBG High Bay LED Cooler  $\phi 134\text{mm}$  with driver connection system

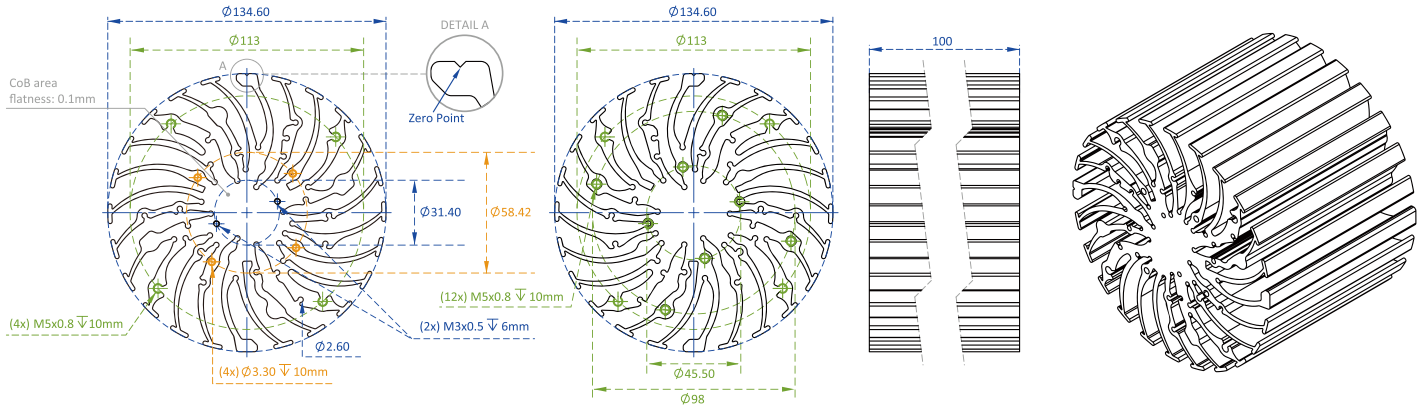


## Drawings & Dimensions

Example: ModuLED Mega 134100-HBG

Bottom - LED & optics side

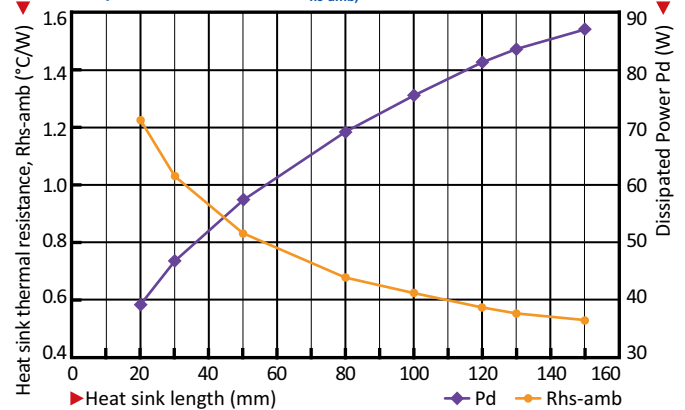
Top - Driver side



## Thermal Data

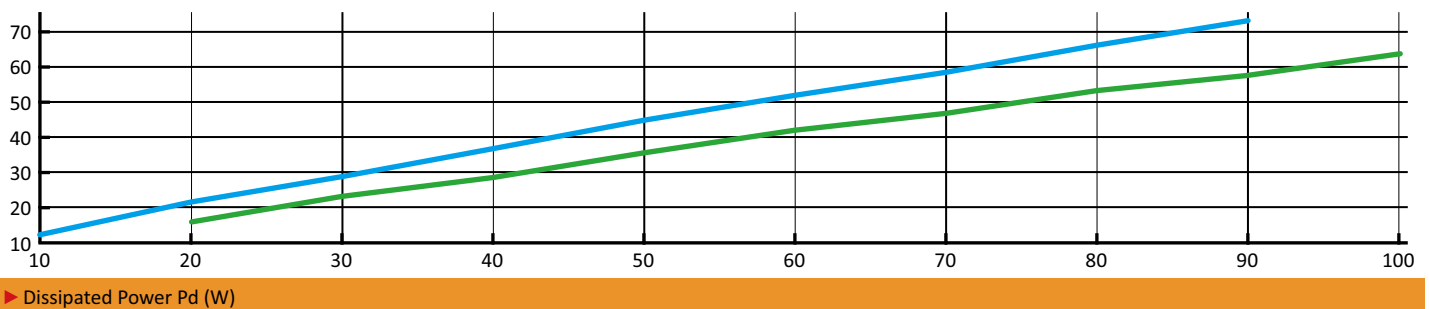
$P_d = P_e \times (1-\eta_L)$	Heat sink to ambient thermal resistance $R_{hs-amb}$ ( $^{\circ}\text{C}/\text{W}$ )		Heat sink to ambient temperature rise $T_{hs-amb}$ ( $^{\circ}\text{C}$ )	
	ModuLED Mega 13450-HBG	ModuLED Mega 134100-HBG	ModuLED Mega 13450-HBG	ModuLED Mega 134100-HBG
10	1.20	-	12	-
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 performance data at a heat sink to ambient temperature difference,  $\Delta T_{hs-amb}$ , of  $50^{\circ}\text{C}$



Heat sink to ambient temperature rise  $T_{hs-amb}$  ( $^{\circ}\text{C}$ )

ModuLED Mega 13450-HBG ModuLED Mega 134100-HBG



Dissipated Power  $P_d$  (W)