





Features & Benefits

- For spot and downlight designs from 1,200 to 5,500 lumen
- Thermal resistance range Rth 1.2 1.8°C/W
- Modular design with mounting holes foreseen for a wide range of LED modules and COB's:
 - Zhaga Book 3 Spot Light Modules Edison Edilex SLM, Osram PrevaLED Core AC / AC PRO / Z3 / Z4, Philips Fortimo SLM, Sharp INTERMO, Tridonic Talexx Stark SLE G3 / G4, Vossloh Schwabe Luga Shop, ...
 - Bridgelux BXRA ESS, ESR, Vero & Décor Vero 10/13/18, V-series
 - Citizen Citiled CLL022-CLU024, CLL032-CLU034, CLL042-CLU044
 - Cree XLamp CXA13, CXB13, CXA15, CXB15, CXA18, CXB18, CXA25, CXB25
 - Edison EdiPower II Star/HM series
 - LG Innotek LEMWM18 10W, 13W, 17W, 24W, LEMWM28, Eagle Eye
 - Lumileds Luxeon COB's 1203, 1204, 1205, 1208, 1211, 1216, Luxeon K arrays K12, K16
 - Osram PrevaLED Cube, Osram Soleriq P6, P9, P13, S13, S19, E30
 - Philips Fortimo DLM Gen5
 - Prolight Opto PACE, PACF, PACG, PABS, PABA, PACB, PACC, PACD
 - Seoul Semiconductor ZC6, ZC12, ZC18, ZC25, ZC40
 - Sharp Mega Zenigata, Tiger Zenigata, Mini Zenigata
 - Tridonic Talexx Stark SLE GEN3 Mini LES-10/LES-17, Gen4-15mm and DLE series Gen2 LES-65
- Diameter 86mm Standard height 30mm & 50mm & 80mm
 Other heights on request
- Extruded from highly conductive aluminum



Order Information







































Example: ModuLED Micro 8650-B

ModuLED Micro 86 1 - 2

1 Height (mm)

2 Anodising Color B - Black C - Clear

ModuLED Micro 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 Recommened screw force 6lb/in

Screws are avaliable from MechaTronix

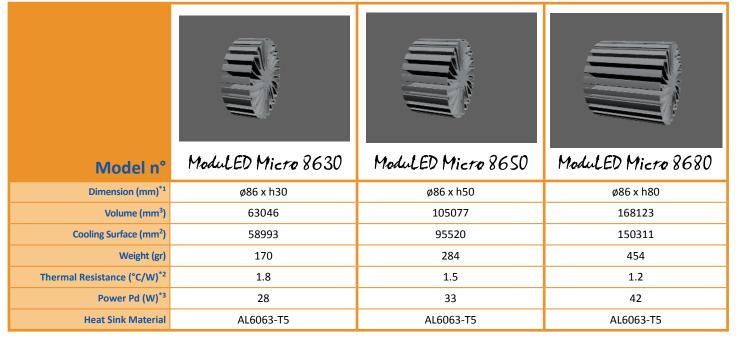








Product Details



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

To calculate the dissipated power please use the following formula: $Pd = Pe \times (1-\eta L)$

Pd - Dissipated power

Pe - Electrical power

ηL = Light effciency 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.



^{*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







Mounting Options

The ModuLED Micro 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 and COB's which standard fit on the ModuLED Micro LED cooler.

The ModuLED Micro is probably the most complete standard LED cooler with regards to mounting possibilities of Zhaga and the latest generation of COB LED modules.

For more details about the required mounting holes and thermal results for your specific LED brand and model, please refer to the brand LED cooler datasheets under "Brand Products" and the brand LED cooler overview under the "Download" menu.

Zhaga



The Zhaga Consortium is developing specifications that enable the interchangeability of LED light sources made by multiple different manufactures. The Zhaga specifications, known as Books, describe the interfaces between LED luminaires and LED light engines. Zhaga's members include hundreds of companies from throughout the global lighting industry. The cooperation is governed by a consortium agreement that defines rules regarding confidentiality, intellectual property and decision making.

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 preapplied from MechaTronix.



Zhaga Book 3 Spot Light Modules

Zhaga Interface Specification Book 3 defines the interfaces of a type-D LED light engine (non-socketable LED module with separate electronic control gear). The LED light engine LLE has a round disc shape with a maxium height of 7.2 mm and a typical diameter of 50 mm. It is suitable for spot-lighting and other applications that benefit from a small, circular source. Book 3 specifies a circular light-emitting surface (LES) that can have a range of diameters, namely 9 mm, 13.5 mm, 19 mm and 23 mm.





Zhaga book 3 compliant LED Spot Light modules *1

- Edison Edilex SLM
- Osram PrevaLED CORE
- Philips Fortimo SLM
- Sharp INTERMO
- Tridonic Talexx Stark SLE
- Vexica Lumaera
- Vossloh Schwabe Luga Shop
- *1 This is a non-binding overview of available Zhaga book 3 LED modules at press

Zhaga Book 3 mounting through the use of LED holders and connectors

With the use of Zhaga Book 3 mechanical compatible LED holders, a wide variety of LED COB's can be mounted in the same way on these LED coolers.

Zhaga Book 3 compatiable LED holders can be found from BJB, TE Connectivity (Tyco), Molex and Ideal Industries.









Mounting Options





Zhaga Book 3 Spot Light Modules

LED COB's for which Zhaga book 3 LED holders are available

- Bridgelux V15, V18, ES rectangular LED array
- Citizen CitiLED CLL032, CLU034, CLL042, CLU044
- Cree XLamp CXA18xx, CXA25xx, CXA30xx
- Edison Opto HM16, HM30, HM40
- Lextar Nimbus 2000, 3000
- LG Innotek LEMWM18 (10W, 13W, 17W, 24W), LEMWM28 (40W)
- Lustrous Lustron LL613F, LL620F, LL630F, LL630D, LL660D
- Nichia J216, J360, L110, L121, L204
- Osram Soleriq P13, S13, S19, E30
- Lumileds Luxeon 1203, 1204, 1205, 1208, 1211 and 1216 Luxeon K12 and K16
- Prolight Opto PABA, PACC, PACD, PACF, PACG
- Samsung LC026, LC040
- Seoul Semiconductor ZC12, ZC18, ZC25, ZC40, ZC60
- Sharp Mega Zenigata and Tiger Zenigata
- Tridonic Talexx Stark SLE Gen3 Mini LES 17

Mounting

 Direct mounting with 2 M3 self tapping screws **Green indicator marks**

Reflector ring Mounting

- This optional ring can be mounted on top of the Edison Opto EdiLex spot light module and provides in this way an easy plug-and-play attachment of various reflectors.
- Mounting with 3 self tapping screws M3 x 10mm **Red indicator marks**

Zhaga Book 11 Spot Light Modules

Zhaga Interface Specification Book 11 defines the interfaces of LED light engines (LLEs) comprising a circular, non-socketable LED module with a separate LED driver (electronic control gear).

The LED modules in Book 11 have an overall diameter of 35 mm and a height of 3.5 mm. Zhaga Book 11 LED modules are mounted by 2 M3 screws evenly located on diameter of 25mm on the LED cooler. There are three LLE categories in Book 11, which are defined by the maximum diameter of the circular light-emitting surface (LES): 6.3 mm, 9.0 mm, 13.5 mm

Book 11 LLEs are suitable for spot-lighting and other applications that benefit from a small, circular source.





LED COB's for which Zhaga book 11 LED holders are available Mounting

- Bridgelux V10 / V13
- Citizen CitiLED CLL022, CLU024
- Cree XLamp CXA13xx, CXA15xx
- Edison Opto HM05, HM09
- Lextar Nimbus 1500
- Osram Solerig P6, P9, P13, S13
- Prolight Opto PACB, PACE
- Seoul Semiconductor ZC6
- Sharp Mini Zenigata
- Tridonic Talexx Stark SLE Gen3 Mini LES 10

 Direct mounting with 2 M3 self tapping screws Orange indicator marks









Mounting Options

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 preapplied from MechaTronix.





Bridgelux Vero 10 LED Array

Model names

- Vero 10 BXRC-27x1000
- Vero 10 BXRC-30x1000
- Vero 10 BXRC-35E1000
- Vero 10 BXRC-40x1000
- Vero 10 BXRC-50x1000

• Direct mounting with 2 self tapping screws M3 x 6mm **Red indicator marks**

Bridgelux Vero 13 / Vero 18 LED Array



Model names

- Vero 13 BXRC-27x2000
- Vero 13 BXRC-30x2000
- Vero 13 BXRC-35E2000
- Vero 13 BXRC-40x2000
- Vero 13 BXRC-50x2000
- Vero 18 BXRC-27x4000
- Vero 18 BXRC-30x4000
- Vero 18 BXRC-35E4000
- Vero 18 BXRC-40E4000
- Vero 18 BXRC-50C4000

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





Model names

- BXRC-xxA1001-B-23
- BXRC-xxH1000-B-xx

Mounting

• Direct mounting with 2 screws M3 x 6mm **Red indicator marks**













Mounting Options



Bridgelux Décor Vero 13 / Vero 18 LED Array

Model names

- BXRC-xxA2001-C-23
- BXRC-xxH2000-C-xx
- BXRC-xxA4001-F-23
- BXRC-xxH4000-F-xx
- BXRC-xxE4000-F-04 • BXRC-56G4000-F-04

Mounting

• Direct mounting with 2 screws M3 x 6mm Blue indicator marks





Bridgelux V series V 8 LED Array

Model names

- V8 BXRE-xxx0800-A
- V8 BXRE-xxx0800-B

• With Bridgelux V8 star holder Mounting with 2 self tapping screws M3 x 6mm Red indicator marks





Bridgelux V series V 10 / V 13 LED Array

Model names

- V10 BXRE-xxx1000-B-xx
- V13 BXRE-xxx2000-C-xx

Mounting

• With Zhaga Book 3 LED holder BJB spotlight connector 47.319.6214 Mounting with 2 screws M3 x 10mm Orange indicator marks





Bridgelux V series V 15 / V 18 LED Array

Model names

- V15 BXRE-xxx3001-D-xx
- V18 BXRE-xxx4000-F-xx

Mounting

• With Zhaga Book 3 LED holder BJB spotlight connector 47.319.2224 Mounting with 2 screws M3 x 10mm **Green indicator marks**





Bridgelux ES Star LED Array

Model names

- BXRA-xxx0540
- BXRA-xxx0740
- BXRA-40E0600 • BXRA-40E0810
- BXRA-xxC0700
- BXRA-xxC1000

• Direct mounting with 2 self tapping screws M3 x 6mm **Red indicator marks**











Mounting Options



Bridgelux ES Rectangle LED Array

Model names

- BXRA-xxx0800
- BXRA-xxx1200
- BXRA-xxx2000
- BXRA-40E0950
- BXRA-40E1350
- BXRA-40E2200BXRA-xxC1100
- BXRA-xxC1600
- BXRA-xxC2600

Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm Yellow indicator marks
- With Zhaga Book 3 LED holder
 BJB spotlight connector 47.319.2040
 Mounting with 2 self tapping screws M3 x 8mm
 Green indicator marks







Mounting Options

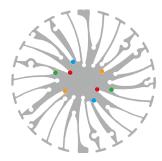
Citizen LED COB



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 CITILED 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 preapplied from MechaTronix.







Citizen Citiled CLL022 - CLU024

Model names

- CLL022-xxxx
- CLU024-xxxx

Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm **Red indicator marks**
- With Zhaga Book 11 LED holder BJB Spotlight connector 47.319.6060 Ideal Industries Chip-Lok™ holder 50-2002CT Mounting with 2 self tapping screws M3 x 6mm Orange indicator marks





Citizen Citiled CLL032 - CLU034

Model names

- CLL032-xxxx
- CLU034-xxxx

- Direct mounting with 2 self tapping screws M3 x 6mm Blue 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 8mm
- **Green indicator marks**

Citizen Citiled CLL042 - CLU044





- **Model names**
- CLL042-xxxx
- CLU044-xxxx

• 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**









Mounting Options

Cree XLamp LED Array

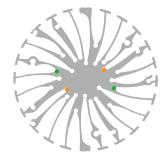


Cree XLamp® LEDs deliver the industry's best lighting-class performance and are application-optimized to enable the lowest system cost.

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 preapplied from MechaTronix.







Cree XLamp CXA13 / CXB13 LED Array

Model names

- CXA1304-xxxx
- CXB1304-xxxx
- CXA1310-xxxx

Mounting

• With Zhaga Book 11 LED holder

BJB Spotlight connector 47.319.6120

Ideal Industries Chip-Lok™ holder 50-2000CR

Mounting with 2 self tapping screws M3 x 10mm

Connecting the self tapping screws M3 x 10mm







Cree XLamp CXA15 / CXB15 LED Array

Model names

- CXA1507-xxxx
- CXB1507-xxxx
- CXA1512-xxxx
- CXB1512-xxxx
- CXA1520-xxxx

Mounting

Mounting

• With Zhaga Book 11 LED holder

BJB Spotlight connector 47.319.6101

Ideal Industries Chip-Lok™ holder 50-2001CR

Mounting with 2 self tapping screws M3 x 10mm

Orange indicator marks





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Model names

- CXA1816-xxxx
- CXB1816-xxxx
- CXA1820-xxxx
- CXB1820-xxxx
- CXA1830-xxxxCXB1830-xxxx

10 years

With Zhaga Book 3 LED holder

BJB Spotlight connector 47.319.2131 (CXA1830 excluded)

Ideal Industries Chip-Lok™ holder 50-2101CR

TE Connectivity Lumawise type Z50 2213401-1

TE Connectivity Lumawise type Z50 2213401-2

Mounting with 2 self tapping screws M3 x 10mm

Green indicator marks









Mounting Options





Cree XLamp CXA25 / CXB25 LED Array

Model names

- CXA2520-xxxx
- CXA2530-xxxx
- CXB2530-xxxx

Mounting

• With Zhaga Book 3 LED holder BJB Spotlight connector 47.319.2141 Ideal Industries Chip-Lok™ holder 50-2102CR Mounting with 2 screws M3 x 10mm **Green indicator marks**

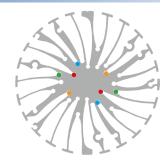
Edison Opto LED Modules and COB's



Edison Opto with headquarters in Chung-Ho Dist, New Taipei City, Taiwan is a professional LED manufacture with specializes in designing and producing Highpower 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 preapplied from MechaTronix.







Edison Opto EdiPower II Star series

Model names

- 2PHV05xxxx
- 2PHV06xxxx
- 2PHV07xxxx
- 2PHV10xxxx

Mounting

• Direct mounting with 2 self tapping screws M3 x 6mm **Red indicator marks**



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Edison Opto Edipower II HM

Model Names 9W

• 2PHM09xxxx

- Direct mounting with 2 self tapping screws M3 x 6mm **Red indicator marks**
- With Zhaga Book 11 LED holder BJB Spotlight connector 47.319.6060 Ideal Industries Chip-Lok™ holder 50-2002CT Mounting with 2 self tapping screws M3 x 8mm **Orange indicator marks**









Mounting Options



Edison Opto Edipower II HM

Model Names 16W - 30W

- 2PHM16xxxx
- 2PHM30xxxx

Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm **Blue indicator marks**
- With Zhaga Book 3 LED holder BJB Spotlight connector 47.319.2021 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**





Edison Opto Edipower II HM

Model Names 40W

• 2PHM40xxxx

Mounting

 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 EdiLex Spot Light Module (SLM)

Model Names

- 5PHR09xxxx
- 5PHR11xxxx
- 5PHR22xxxx
- 5PHV35xxxx

Mounting

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



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Mounting Options

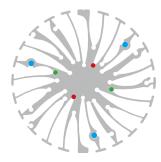
LG Innotek LED Modules and COB



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 and opening a smarter future through the development of new eco-friendly materials. With the world's highest production capacity as a singlefactory 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 preapplied from MechaTronix.







LG LEMWM18 10W/13W/17W/24W COB

Model names

- LEMWM18580xxxx
- LEMWM18680xxxx
- LEMWM18780xxxx • LEMWM18880xxxx

Mounting

- Direct mounting with 2 self tapping screws M2 x 6mm **Red indicator marks**
- 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

• 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**





LG Eagle Eye LED Modules

Model names • LLDMWW0-15KxxxA

Mounting

• Direct mounting with 3 self tapping screws M4 x 6mm Blue indicator marks



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Mounting Options

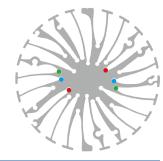
Lumileds LED Array & COB



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 preapplied from MechaTronix.



LUMILEDS 1203



Luxeon COB 1203

Model names

• Luxeon COB LHC1-xxxx-1203

Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm Red indicator marks
- With Zhaga Book 3 LED holder
 Ideal Industries Chip-Lok™ holder 50-2100NC
 TE Connectivity Lumawise type Z50 2213382-1
 TE Connectivity Lumawise type Z50 2213382-2
 Mounting with 2 self tapping screws M3 x 8mm
 Green indicator marks





Luxeon COB 1204 - 1205 - 1208

Model names

- Luxeon COB LHC1-xxxx-1204
- Luxeon COB LHC1-xxxx-1205
- Luxeon COB LHC1-xxxx-1208

Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm
 Blue indicator marks
- With Zhaga Book 3 LED holder
 BJB spotlight connector 47.319.2011
 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



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Luxeon COB 1211

Model names

• Luxeon COB LHC1-xxxx-1211

Mounting

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









Mounting Options





Luxeon COB 1216

Model names

• Luxeon COB LHC1-xxxx-1216

Mounting

With Zhaga Book 3 LED holder
 BJB spotlight connector 47.319.2030
 Ideal Industries Chip-Lok™ holder 50-2204CT
 Mounting with 2 screws M3 x 10mm
 Green indicator marks





Luxeon K Array K12 - K16

Model names

• Luxeon K12 LXKx-Pxxx-xx12 (A)
• Luxeon K16 LXKx-Pxxx-xx16 (A)

Mounting

With Zhaga Book 3 LED holder
 BJB spotlight connector 47.319.2070
 Mounting with 2 self tapping screws M3 x 8mm
 Green indicator marks









Mounting Options

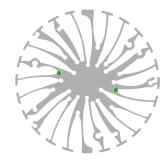
Lustrous LED COB

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 preapplied from MechaTronix.





Lustrous Lustron LL613F - LL620F LED COB

Model names

- Lustron LL613F1206-xxx
- Lustron LL620F1208-xxx

Mounting

• 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 LL630F - LL630D - LL660D LED COB

Model names

- Lustron LL630F1210-xxx
- Lustron LL630D1210-xxx
- Lustron LL660D1210-xxx

Mounting

• 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**









Mounting Options

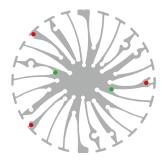
Osram PrevaLED LED Modules



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 preapplied from MechaTronix.





Osram PrevaLED Core Z3

Model names

- PL-CORE-1100-xxx-Z3
- PL-CORE-2000-xxx-Z3
- 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-Z4-2000-xxx
- PL-CORE-Z4-3000-xxx
- PL-CORE-Z4-4500-xxx
- PL-CORE-Z4-5000-xxx

Mounting

• Direct mounting with 2 screws M3 x 10mm **Green indicator marks**



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Osram PrevaLED Core AC

Model names

- PL-CORE-AC-800xx
- PL-CORE-AC-2000xx

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









Mounting Options





Osram PrevaLED Core AC PRO

Model names

- PL-CORE-AC-PRO-2000-xxx
- PL-CORE-AC-PRO-3000-xxx

Mounting

• Direct mounting with 2 screws M3 x 10mm Green indicator marks



Osram PrevaLED Cube G2

Model names

- PL-CUBE-1100-xxx-0.35A-G2
- 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

- LEP-CUB-AC-xxx-G1
- 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









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 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 preapplied from MechaTronix.







Osram Soleriq P6 LED COB

Model names

- GW MAEGB1.EM
- GW MAEGB1.CM

Mounting

 With Zhaga Book 11 LED holder BJB Spotlight connector 47.319.6190 Mounting with 2 screws M3 x 8mm Orange indicator marks





Osram Soleriq P9 LED COB

Model names

- GW MAFJB1.EM
- GW MAFJB1.CM

Mounting

With Zhaga Book 11 LED holder
 BJB Spotlight connector 47.319.6200
 Mounting with 2 screws M3 x 8mm
 Orange indicator marks

Osram Soleriq P13 LED COB



- GW MAGMB1.EM
- GW MAGMB1.CM

Mounting

- With Zhaga Book 3 LED holder
 Ideal Industries Chip-Lok™ holder 50-2101CR
 Mounting with 2 screws M3 x 8mm
 Green indicator marks
- With Zhaga Book 11 LED holder
 BJB Spotlight connector 47.319.6111
 Mounting with 2 screws M3 x 8mm
 Orange indicator marks



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Mounting Options



Model names

• GW-KAGHB1.xxxx

Mounting

- Direct mounting with 2 screws M3 x 6mm Red indicator marks
- With Zhaga Book 3 LED holder
 Ideal Industries Chip-Lok™ holder 50-2101CR
 TE Connectivity Lumawise type Z50 2213401-1
 TE Connectivity Lumawise type Z50 2213401-2
 Mounting with 2 screws M3 x 8mm
 Green indicator marks
- With Zhaga Book 11 LED holder
 BJB Spotlight connector 47.319.6111
 Mounting with 2 screws M3 x 8mm
 Orange indicator marks





Osram Solerig 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

- Direct mounting with 2 self tapping screws M3 x 6mm Green indicator marks
- With Zhaga Book 3 LED holder
 BJB spotlight connector 47.319.2090
 Mounting with 2 self tapping screws M3 x 8mm
 Green indicator marks









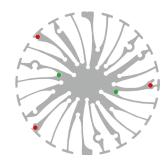
Mounting Options

Philips LED Modules

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 preapplied from MechaTronix.





Philips Fortimo SLM GEN3 / GEN4 LED Modules

Model names

- Fortimo LED SLM 2000 G3
- Fortimo LED SLM 3000 G3
- Fortimo LED SLM 4000 G3
- Fortimo LED SLM 4500 G3
- Fortimo LED SLM 1100 G4
- Fortimo LED SLM 2000 G4 • Fortimo LED SLM 3000 G4
- 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 1100 G5
- Fortimo DLM 2000 G5
- Fortimo DLM 3000 G5

Mounting

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



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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 preapplied from MechaTronix.







Prolight Opto BS series PABS star COB

Model names

- PABS-6xxx-xxxx
- PABS-9xxx-xxxx

Mounting

• Direct mounting with 2 self tapping screws M3 x 6mm Red indicator marks





Prolight Opto BI series PABA COB

Model names

- PABA-10xxx-xxxx
- PABA-15xxx-xxxx
- PABA-22xxx-xxxx
- PABA-26xxx-xxxx
- PABA-35xxx-xxxx
- PABA-50xxx-xxxx

- Direct mounting with 2 self tapping screws M3 x 6mm **Yellow indicator marks**
- With Zhaga Book 3 LED holder BJB spotlight connector 47.319.2040 Mounting with 2 self tapping screws M2 x 6mm

Green indicator marks





Prolight Opto CE series PACE COB

Model names

- PACE-14xxx-xxxx
- PACE-21xxx-xxxx
- PACE-28xxx-xxxx

Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm **Red indicator marks**
- With Zhaga Book 11 LED holder BJB Spotlight connector 47.319.6060

Mounting with 2 self tapping screws M3 x 6mm

Orange indicator marks

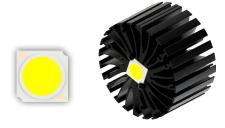
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Mounting Options



Prolight Opto CF series PACF COB

Model names

• PACF-57xxx-xxxx

Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm
 Blue indicator marks
- With Zhaga Book 3 LED holder
 BJB Spotlight connector 47.319.2021
 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

With Zhaga Book 3 LED holder
 BJB spotlight connector 47.319.2030
 Mounting with 2 self tapping screws M2 x 6mm
 Green indicator marks





Prolight Opto CI series PACB COB

Model names

- PACB-7xxx-xxxx
- PACB-9xxx-xxxx

Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm Red indicator marks
- With Zhaga Book 11 LED holder
 BJB Spotlight connector 47.319.6060
 Mounting with 2 self tapping screws M3 x 6mm

Orange indicator marks





Prolight Opto CII series PACC COB

Model names

• PACC-18xxx-xxxx

Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm
 Blue indicator marks
- With Zhaga Book 3 LED holder
 BJB Spotlight connector 47.319.2021
 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









Mounting Options





Prolight Opto CIII series PACD COB

Model names

• PACD-40xxx-xxxx

Mounting

• With Zhaga Book 3 LED holder BJB spotlight connector 47.319.2030 Mounting with 2 self tapping screws M2 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 preapplied from MechaTronix.







Seoul Semiconductor ZC 6 LED COB

Model names

- SDW01F1C
- SDW81F1C
- SDW91F1C

- Direct mounting with 2 self tapping screws M3 x 6mm **Red indicator marks**
- With Zhaga Book 11 LED holder BJB Spotlight connector 47.319.6060 Ideal Industries Chip-Lok™ holder 50-2002CT Mounting with 2 self tapping screws M3 x 8mm
- **Orange indicator marks**

Seoul Semiconductor ZC 12 / ZC 18 LED COB



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Model names

- SDW02F1C
- SDW82F1C
- SDW92F1C
- SDW03F1C
- SDW83F1C • SDW93F1C

Mounting

- Direct mounting with 2 self tapping screwsM3 x 6mm Blue 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 8mm

Green indicator marks









Mounting Options



Seoul Semiconductor ZC 25 / 40 LED COB

Model names

- SDW04F1C
- SDW84F1C
- SDW94F1C
- SDW05F1C
- SDW85F1C
- SDW95F1C

Mounting

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

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 preapplied 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



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Mounting Options



Sharp Mega Zenigata 15-25W/25-40W/35-50W/50-80W LED COB

Model names

- GW5DxAxxM04
- GW6DxAxxNFC
- GW5DxCxxM04
- GVV3DACAAIVIO-
- GW6DxCxxNFC
- GW6DxDxxNFCGW5DxExxMR5
- 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





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





Sharp Mini Zenigata 4-10W/10-15W/15-24W LED COB

Model names

- GW5BQCxxK03
- GW5BQFxxK03
- GW5BMFxxK04
- GW5BTJxxK03
- GW5BMCxxKG4
- GW6BxGxxHED
- GW5BMJxxK04
 GW6BxExxHED
- GW6BxWxxHED
- GW5BMRxxK05
- GW5BIVIRXXKU5
 GW6BxRxxHED
- GW6BxSxxHED

Mounting

With Zhaga Book 11 LED holder
 BJB spotlight connector 47.319.6180
 Ideal Industries Chip-Lok™ holder 50-2000P
 Mounting with 2 self tapping screws M3 x 6mm
 Orange indicator marks









Mounting Options

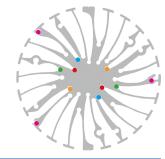
Tridonic LED Modules and COB



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 preapplied from MechaTronix.



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<u>Tridonic Talexx Stark SLE GEN3 SELECT / CLASSIC / FOOD / ART</u>

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





Tridonic Talexx Stark SLE GEN3 Mini LES-10 SELECT / CLASSIC / ART

Model names

• STARK-SLE-PURE-G3-10-xxx

Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm Red indicator marks
- With Zhaga Book 11 LED holder
 BJB Spotlight connector 47.319.6060
 Mounting with 2 self tapping screws M3 x 8mm
 Orange indicator marks

Tridonic Talexx Stark SLE GEN3 Mini LES-17 SELECT / CLASSIC / ART



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Model names

• STARK-SLE-PURE-G3-17-xxx

Mounting

- Direct mounting with 2 self tapping screws M3 x 6mm Blue indicator marks
- With Zhaga Book 3 LED holder
 BJB Spotlight connector 47.319.2021
 Mounting with 2 self tapping screws M3 x 8mm
 Green indicator marks









Mounting Options





Tridonic Talexx Stark SLE GEN4 ADVANCE / EXCITE

Model names

• STARK-SLE-G4-15mm-2000lm-xxx

Mounting

• Direct mounting with 2 self tapping screws M3 x 6mm Orange indicator marks





Tridonic Talexx Stark SLE GEN4 ADVANCE / EXCITE

Model names

- STARK-SLE-G4-19mm-3000lm-xxx
- STARK-SLE-G4-23mm-5000lm-xxx

Mounting

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





Talexx Stark DLE GEN2 CLASSIC / integrated Advanced

Model names

- STARK-DLE-G2-LES65-xxxx
- STARK-DLE-PURE-G2-LES65-xxxx

Mounting

• Direct mounting with 3 self tapping screws M3 x 8mm Pink indicator marks



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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 preapplied 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

<u>Mounting</u>

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





Luga Shop 2014 Kit LED COB

Model names

- DMS088
- DMS128
- DMS158

Mounting

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



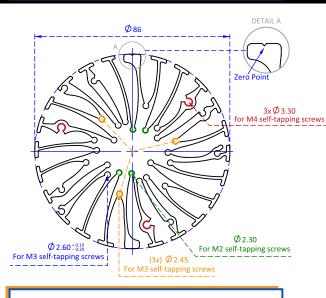
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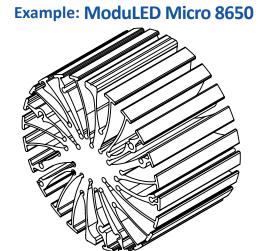




Drawings & Dimensions

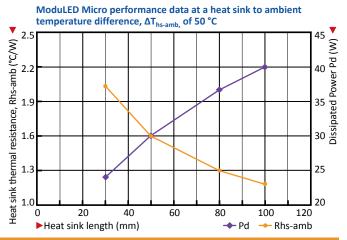


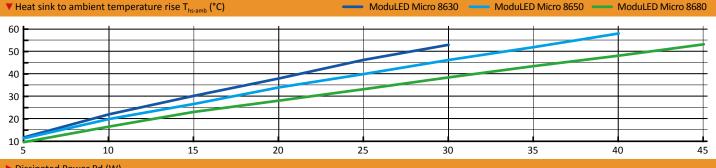
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Thermal Data

Pd = Pe x (1-ηL)		Heat sink to ambient thermal resistance R _{hs-amb} (°C/W)			Heat sink to ambient temperature rise $T_{\text{hs-amb}}$ (°C)		
		ModuLED Micro 8630	ModuLED Micro 8650	ModuLED Micro 8680	ModuLED Micro 8630	ModuLED Micro 8650	ModuLED Micro 8680
Dissipated Power Pd(W)	5	2.4	2.4	2.0	12	12	10
	10	2.2	2.0	1.7	22	20	17
	15	2.0	1.8	1.53	30	27	23
	20	1.9	1.7	1.4	38	34	28
	25	1.84	1.6	1.36	46	40	34
	30	1.76	1.53	1.3	53	46	39
	35	-	1.48	1.25	-	52	44
	40	-	1.45	1.2	-	58	48
	45	-	-	1.17	-	-	53





▶ Dissipated Power Pd (W)

