

MechaTronix in LED

LPF8050-ZHC Zhaga Pin Fin LED Cooler ø60mm

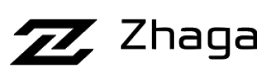


Features & Benefits

- For spot and downlight designs from 1,000 to 2,800 lumen
- Thermal resistance 2.34°C/W
- Modular design with mounting holes foreseen for direct mounting of a wide range of LED modules and COB's:
 - Zhaga book 3 Spot Light Modules Edison Edilex, Osram PrevaLED Core AC, Core Z3, Philips Fortimo SLM, Tridonic Talexx Stark SLE, Vossloh Schwabe Luga Shop, ...
 - Bridgelux BXRA ES Rectangle LED array
 - Citizen Citiled CLL032-CLU034
 - Cree XLamp CXA13xx, CXA15xx
 - Lustrous LUSTRON 6 series LL613F / LL620F
 - LG Innotek LEMWM18 10W, 13W, 17W, 24W
 - Osram PrevaLED Core AC, Core Z3, Soleriq S19, E30
 - Philips Lumileds Luxeon COB's 1203, 1204, 1205, 1208, 1211, Luxeon K arrays K12, K16
 - Seoul Semiconductor ZC6, ZC12, ZC18, ZC25
 - Tridonic Talexx Stark SLE GEN3 Mini LES-17
- Diameter 80mm - Height 50mm
Other heights on request
- Better performance under tilted position
- Forged from highly conductive aluminum



Order Information



Example : LPF8050-ZHC-B

LPF8050-ZHC- **1**

- 1** Anodising Color
 - B - Black
 - C - Clear
 - Z - Custom (specify)

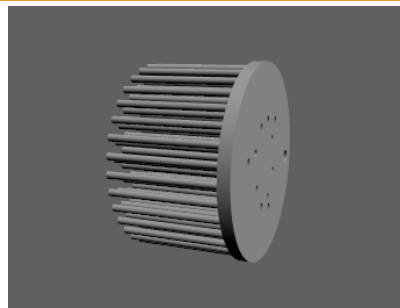
The LPF8050-ZHC pin fin LED cooler is designed in this way that you can mount various LED modules on the same LED cooler
 Simple mounting with 2 screws
 Recommended screw force 6lb/in
 Screws are available from MechaTronix

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Product Details



Model n°

LPF8050-ZHC

Dimension (mm) ^{*1}	ø80 x h50
Volume (mm ³)	72128
Cooling Surface (mm ²)	74885
Weight (gr)	195
Thermal Resistance (°C/W) ^{*2}	2.34
Power Pd (W) ^{*3}	21
Heat Sink Material	AL1070

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

^{*2} The thermal resistance Rth is determined with a calibrated heat source of 30mm x 30mm central placed on the heat sink, Tamb 40° and an open environment. Reference data @ heat sink to ambient temperature rise Ths-amb 50°C
The thermal resistance of a LED cooler is not a fix value and will vary with the applied dissipated power Pd

^{*3} Dissipated power Pd. Reference data @ heat sink to ambient temperature rise Ths-amb 50°C
The maximal dissipated power needs to be verified in function of required case temperature Tc or junction temperature Tj and related to the estimated ambient temperature where the light fixture will be placed
Please be aware the dissipated power Pd is not the same as the electrical power Pe of a LED module

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

Pd - Dissipated power

Pe - Electrical power

η_L = Light efficiency of the LED module

Notes:

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

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Mounting Options

The LPF8050-ZHC Pin Fin LED cooler is 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 Bridgelux LED array which standard fit on the LPF8050-ZHC Pin Fin LED cooler.

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

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



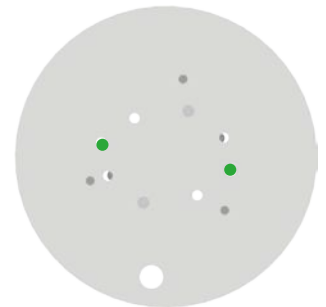
Bridgelux LED Arrays



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 ES Rectangle LED Array

Model names

- BXRA-xxx0800
- BXRA-xxx1200
- BXRA-xxx2000
- BXRA-40E0950
- BXRA-40E1350
- BXRA-40E2200
- BXRA-xxC1100
- BXRA-xxC1600
- BXRA-xxC2600

Mounting

- With Zhaga Book 3 LED holder
- BJB spotlight connector 47.319.2040
- Mounting with 2 screws M3 x 10mm
- Green indicator marks

MechaTronix in LED

LPF8050-ZHC Zhaga Pin Fin LED Cooler ø60mm



Mounting Options

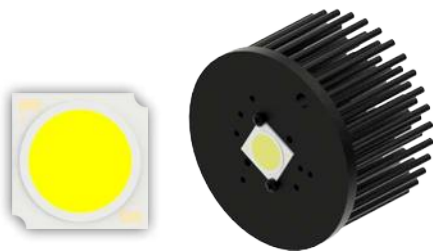
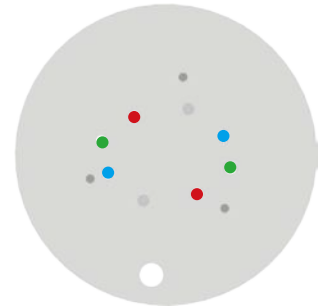
Citizen LED COB



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 CITELED 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 LED CLL032 - CLU034

Model names

- CLL032-xxxx
- CLU034-xxxx

Mounting

- Direct mounting with 2 screws M3 x 6mm
Red indicator marks
- With Zhaga Book 3 LED holder
BJB Spotlight connector 47.319.2020
TE Connectivity Lumawise type Z50 2213254-1
TE Connectivity Lumawise type Z50 2213254-2
Mounting with 2 screws M3 x 10mm
Green indicator marks
- TE Connectivity 1pc LED holder 6-2154874-1
TE Connectivity Scalable 2pc LED holder 2-2154857-1
Blue indicator marks

MechaTronix in LED

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Mounting Options

Cree XLamp LED Array

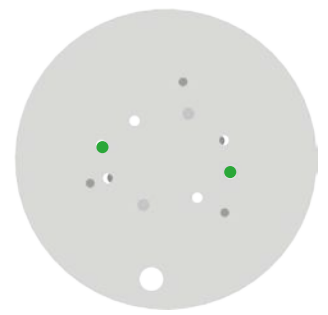


Cree XLamp® LEDs deliver the industry's best lighting-class performance and are application-optimized to enable the lowest system cost.

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 CXA18 LED Array

Model names

- CXA1816-xxxx
- CXA1820-xxxx

Mounting

- With Zhaga Book 3 LED holder
- BJB Spotlight connector 47.319.2130
- TE Connectivity Lumawise type Z50 2213401-1
- TE Connectivity Lumawise type Z50 2213401-2
- Mounting with 2 screws M3 x 10mm
- Green indicator marks

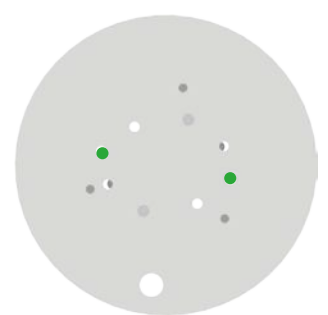
LG Innotek LED COB



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 10W / 13W / 17W / 24W COB

Model names

- LEMWM18580xxxx
- LEMWM18680xxxx
- LEMWM18780xxxx
- LEMWM18880xxxx

Mounting

- With Zhaga Book 3 LED holder
- BJB Spotlight connector 47.319.2080
- Mounting with 2 screws M3 x 6mm
- Green indicator marks

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Mounting Options

Lustrous LED COB

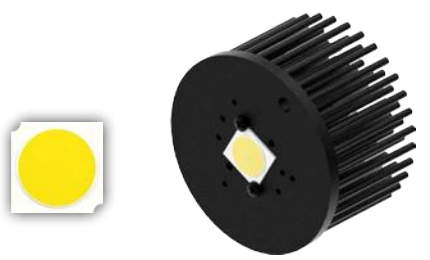
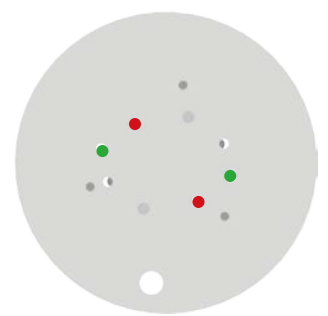
LUSTROUS

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 LL620F1209-xxx

Mounting

- Direct mounting with 2 screws M3 x 6mm
Red indicator marks
- With Zhaga Book 3 LED holder
BJB spotlight connector 47.319.2020
Mounting with 2 self tapping screws M3 x 8mm
Green indicator marks

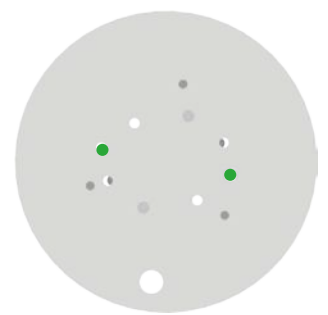
Osram PrevaLED LED Modules



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 AC

Model names

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

Mounting

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

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Mounting Options



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 screws M3 x 10mm
- Green indicator marks

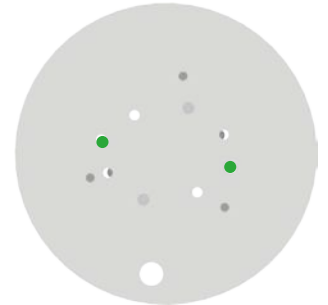
Osram Opto Semiconductors LED COB



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.



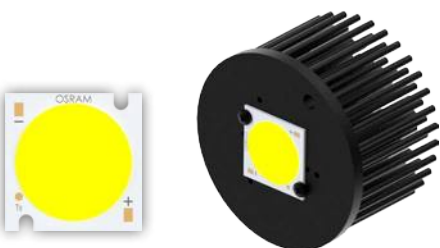
Osram Soleriq S19 LED COB

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 screws M3 x 8mm
- Green indicator marks



Osram Soleriq E30 LED COB

Model names

- GW KAJRB2.EM-TPTR-xxxx
- GW KAJRB2.EM-SUTQ-xxxx

Mounting

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

MechaTronix in LED

LPF8050-ZHC Zhaga Pin Fin LED Cooler ø60mm



Mounting Options

Philips LED Modules

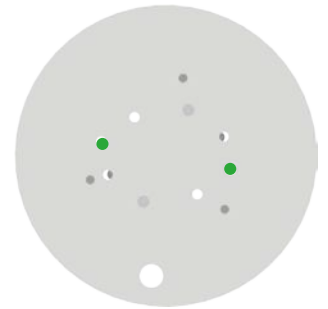
PHILIPS

sense and simplicity

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 2000 G3
- Fortimo LED SLM 3000 G3
- Fortimo LED SLM 1100 G4
- Fortimo LED SLM 2000 G4
- Fortimo LED SLM 3000 G4
- Fortimo LED SLM 3000 Food & Meat G4

Mounting

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

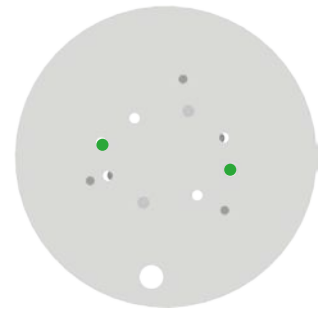
Philips Lumileds LED Array & COB

PHILIPS LUMILEDS

Philips 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 1203

Model names

- Luxeon COB LHC1-xxxx-1203

Mounting

- With Zhaga Book 3 LED holder
- TE Connectivity Lumawise type Z50 2213382-1
- TE Connectivity Lumawise type Z50 2213382-2
- Mounting with 2 screws M3 x 8mm
- Green indicator marks

MechaTronix in LED

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Mounting Options



Luxeon COB 1204 - 1205 - 1208

Model names

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

Mounting

- With Zhaga Book 3 LED holder
- BJB spotlight connector 47.319.2010
- TE Connectivity Lumawise type Z50 2213130-1
- TE Connectivity Lumawise type Z50 2213130-2
- Mounting with 2 screws M3 x 8mm
- Green indicator marks



Luxeon K arrays 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 screws M3 x 10mm
- Green indicator marks

MechaTronix in LED

LPF8050-ZHC Zhaga Pin Fin LED Cooler ø60mm



Mounting Options

Seoul Semiconductor LED COB

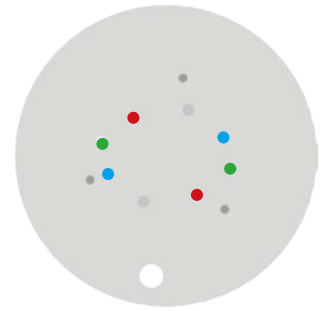


SEOUL SEMICONDUCTOR

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.



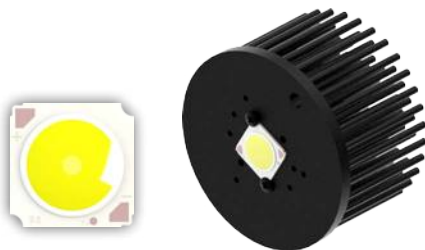
Seoul Semiconductor ZC 12 / ZC 18 LED COB

Model names

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

Mounting

- Direct mounting with 2 screws M3 x 6mm
- Red indicator marks
- With Zhaga Book 3 LED holder
- BJB Spotlight connector 47.319.2020
- TE Connectivity Lumawise type Z50 2213254-1
- TE Connectivity Lumawise type Z50 2213254-2
- Mounting with 2 screws M3 x 6mm
- Green indicator marks
- TE Connectivity 1pc LED holder 6-2154874-1
- TE Connectivity Scalable 2pc LED holder 2-2154857-1
- Mounting with 2 screws M3 x 6mm
- Blue indicator marks



Seoul Semiconductor ZC 25 LED COB

Model names

- SDW04F1C
- SDW84F1C
- SDW94F1C

Mounting

- With Zhaga Book 3 LED holder
- BJB Spotlight connector 47.319.2030
- Mounting with 2 screws M3 x 6mm
- Green indicator marks



MechaTronix in LED

LPF8050-ZHC Zhaga Pin Fin LED Cooler ø60mm



Mounting Options

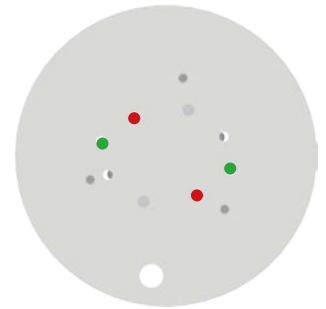
Tridonic LED Modules and COB



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 pre-applied from MechaTronix.



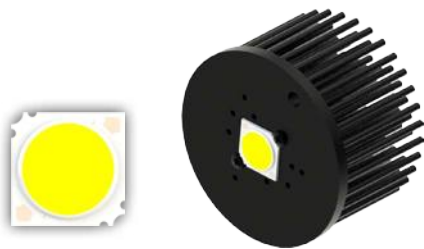
Tridonic Talexx Stark SLE GEN3 SELECT / CLASSIC / FOOD / ART

Model names

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

Mounting

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



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

Model names

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

Mounting

- Direct mounting with 2 screws M3 x 6mm
- Red indicator marks
- With Zhaga Book 3 LED holder
- BJB Spotlight connector 47.319.2020
- Mounting with 2 screws M3 x 8mm
- Green indicator marks

MechaTronix in LED

LPF8050-ZHC Zhaga Pin Fin LED Cooler ø60mm



Mounting Options

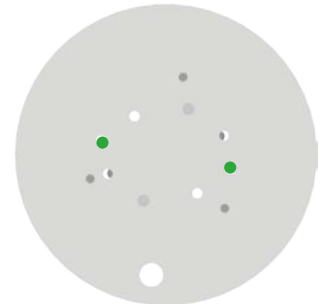
Vossloh Schwabe LED Modules



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 screws M3 x 10mm
- Green indicator marks



Luga Shop 2014 Kit LED COB

Model names

- DMS088
- DMS128
- DMS158

Mounting

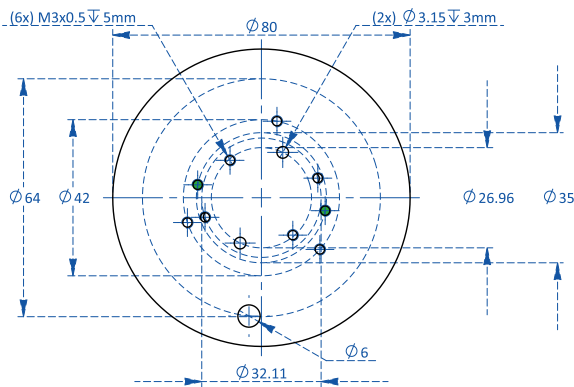
- With Luga Shop Kit holder
- Mounting with 2 screws M3 x 6mm
- Green indicator marks

MechaTronix in LED

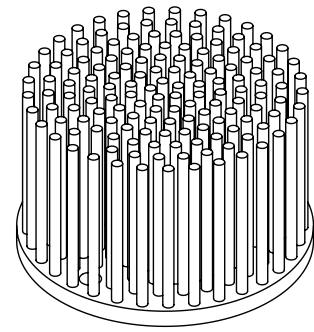
LPF8050-ZHC Zhaga Pin Fin LED Cooler ø60mm



Drawings & Dimensions



Example: LPF8050-ZHC

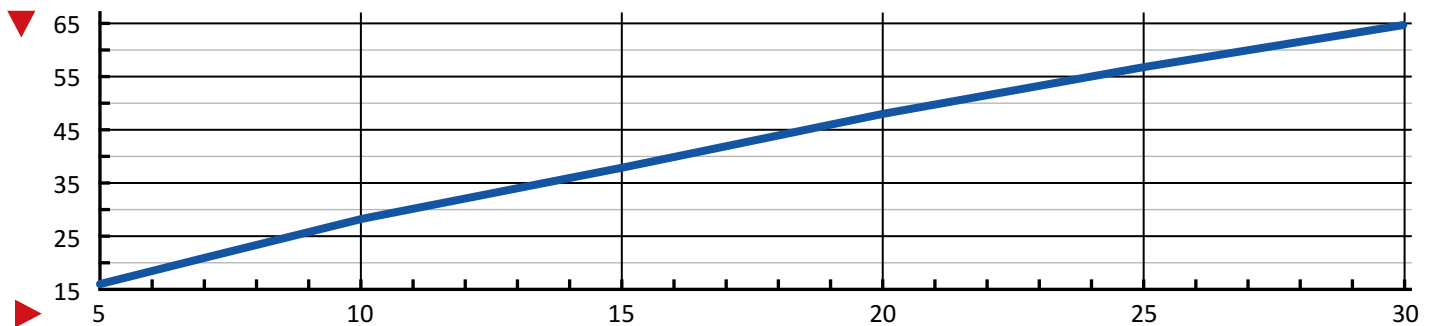


Thermal Data

$P_d = P_e \times (1 - \eta_L)$			LED Light efficiency, η_L (%)			Heat sink to ambient thermal resistance R_{hs-amb} (°C/W)	Heat sink to ambient temperature rise T_{hs-amb} (°C)
			17%	20%	25%		
Dissipated Power P_d (W)	5	Electrical Power P_e (W)	6.02	6.25	6.67	3.2	16
	7		8.43	8.75	9.33	3.0	21
	10		12.05	12.50	13.33	2.8	28
	15		18.07	18.75	20.00	2.5	38
	20		24.10	25.00	26.67	2.4	48
	25		30.12	31.25	33.33	2.3	57
	30		36.14	37.50	40.00	2.2	65

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

— LPF8050-ZHC



Dissipated Power P_d (W)