

MechaTronix in LED

LPF3550-ZHC Pin Fin LED Cooler ø35mm



Features & Benefits

- For spot and downlight designs from 300 to 1,000 lumen
- Thermal resistance Rth 7.41°C/W
- Modular design with mounting holes foreseen for a wide range of LED modules and COB's:
 - Bridgelux Vero 10, Décor Vero 10, V6, V8, V10
 - Citizen Citiled CLL022-CLU024-CLU026-CLU028
 - Cree XLamp CXA13, CXB13
 - Edison EdiPower II Star series, EdiPower II / EdiPower III HM05, HM09
 - Luminus CLM-9, CXM-9 (ACxx)
 - Osram Soleriq P6
 - Prolight Opto PACE, PACB
 - Seoul Semiconductor ZC6
 - Sharp Mini Zenigata
 - Tridonic TALEXX Stark SLE GEN3 Mini LES-10, TALEXXmodule SLE GEN4 Essence 10mm, SLE GEN5 06/15mm, SLE GEN6 10mm
- Diameter 35mm - Height 50mm
Other heights on request
- Better performance under tilted position
- Forged from highly conductive aluminum



Order Information



Example : LPF3550-ZHC-B

LPF3550-ZHC- **1**

1 Anodising Color

B - Black
C - Clear
Z - Custom (specify)

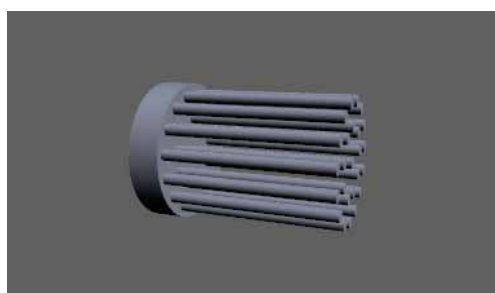
The LPF3550-ZHC pin fin LED cooler is designed in this way that you can mount LED modules from various manufacturers on the same LED cooler
This LED cooler is thermally validated for all our eco partners mentioned on the left side

MechaTronix in LED

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Product Details



Model n°

LPF3550-ZHC

Dimension (mm) ^{*1}	ø35 x h50
Volume (mm ³)	14579
Cooling Surface (mm ²)	12655
Weight (gr)	39
Thermal Resistance (°C/W) ^{*2}	7.41
Power Pd (W) ^{*3}	6.8
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°

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Mounting Options

The LPF3550-ZHC Pin Fin 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 LPF3550-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 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.

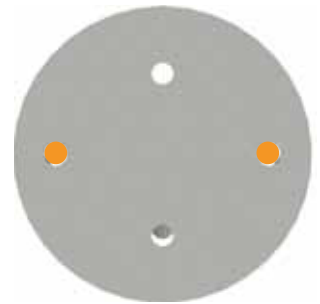
Zhaga



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 pre-applied from MechaTronix.



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

- Bridgelux V10 / V13
- Citizen CitiLED CLU022, CLU024, CLU026, CLU700
- Cree XLamp CXA / CXB 13xx, 15xx
- Edison Opto HM05, HM09, HM13
- Lextar Nimbus 1500
- Osram Soleriq P6, P9, P13, S13
- Prolight Opto PACB, PACE
- Seoul Semiconductor ZC6
- Sharp Mini Zenigata
- Tridonic TALEXX Stark SLE Gen3 Mini LES 10
- TALEXXmodule SLE Gen4 10mm, Gen5 06mm - 11mm

Mounting

- Direct mounting with 2 M3 screws
- Orange indicator marks

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Mounting Options

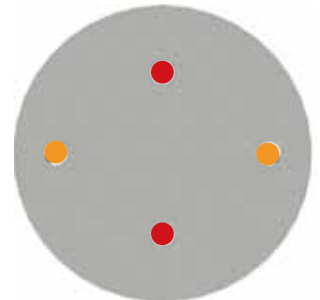
Bridgelux LED Arrays



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 pre-applied from MechaTronix.



Bridgelux Vero 10 & Décor 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
- BXRC-xxA1001-B-23
- BXRC-xxH1000-B-xx

Mounting

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



Bridgelux V series V 6 / V 8 LED Array

Model names

- V6 BXRE-xxx0400-A
- V6 BXRE-xxx0400-B
- V8 BXRE-xxx0800-A
- V8 BXRE-xxx0800-B

Mounting

- With Bridgelux V6 / V8 star holder
- Mounting with 2 screws M3 x 6mm
- Red indicator marks



Bridgelux V series V 10 LED Array

Model names

- V10 BXRE-xxx1000-B-xx

Mounting

- With Zhaga Book 11 LED holder
- BJB spotlight connector 47.319.6214
- Mounting with 2 screws M3 x 6mm
- Orange indicator marks



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Mounting Options

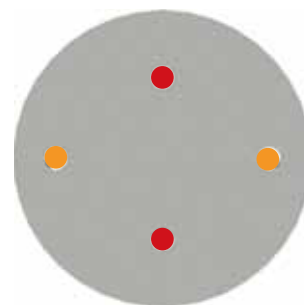
Citizen LED COB

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 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 CL022 - CLU024 - CLU026 - CLU028

Model names

- CLU022-XXXX
- CLU024-XXXX
- CLU026-XXXXXX
- CLU028-XXXXXX

Mounting

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

Cree XLamp LED Array

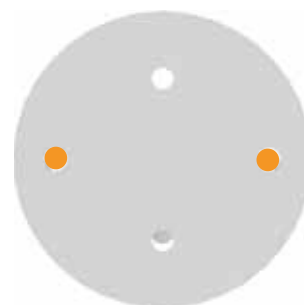
CREE

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 CXA13 / CXB13 LED Array

Model names

- CXA1304-XXXX
- CXB1304-XXXX

Mounting

- With Zhaga Book 11 LED holder
BJB Spotlight connector 47.319.6120
Ideal Industries Chip-Lok™ holder 50-2000CR
Mounting with 2 screws M3 x 6mm
Orange indicator marks

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Mounting Options

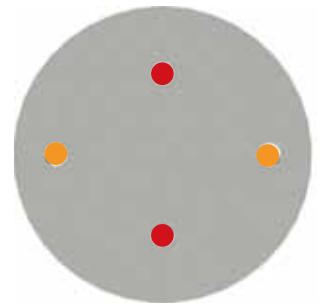
Edison Opto LED Modules and COB's



Edison Opto with headquarters in Chung-Ho Dist, New Taipei City, Taiwan is a professional LED manufacture with specializes 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 Star series

Model names

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

Mounting

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



Edison Opto EdiPower II & EdiPower III HM series

Model names 5W - 9W

- 2PHM05xxxx
- 2PHM09xxxx

Mounting

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



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Mounting Options

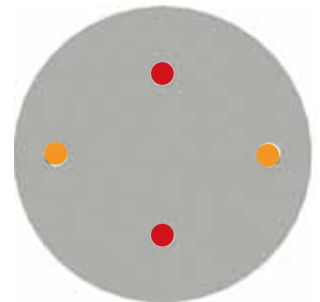
Luminus COB Arrays



Patented, high performance Luminus LEDs are the brightest and most versatile solid state light sources available today, redefining the solid state lighting landscape by enabling the adoption of LED technology into emerging markets. Luminus technology is used in commercial and industrial lighting fixtures, theatrical lighting, projectors, signs, medical equipment, UV curing... just about anywhere a bright, efficient, reliable, long-life light source is needed.

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.



Luminus Xnova COB Array

Model names

- CLM-9
- CXM-9 (ACxx)

Mounting

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

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Mounting Options

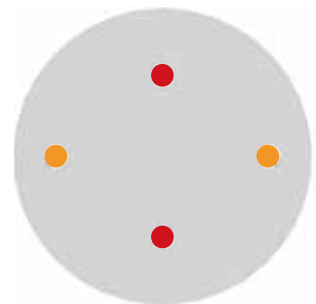
Prolight Opto LED COB



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 CE series PACE COB

Model names

- PACE-7xxx-xxxx

Mounting

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



Prolight Opto CI series PACB COB

Model names

- PACB-5xxx-xxxx
- PACB-7xxx-xxxx
- PACB-9xxx-xxxx

Mounting

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



MechaTronix in LED

LPF3550-ZHC Pin Fin LED Cooler ø35mm



Mounting Options

Seoul Semiconductor LED COB

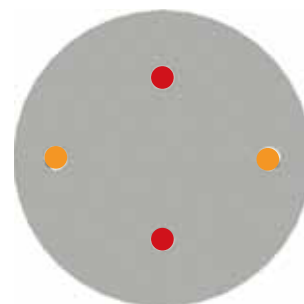


SEOUL SEMICONDUCTOR

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 6 LED COB

Model names

- SDW01F1C
- SDW81F1C
- SDW91F1C

Mounting

- Direct mounting with 2 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 screws M3 x 6mm
- Orange 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 Mini Zenigata 4-10W LED COB

Model names

- GW5BQCxxK03
- GW5BQFxxK03
- GW5BMFxxK04
- GW5BTJxxK03
- GW5BMCxxKG4
- GW6BxGxxHED

Mounting

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

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MTX
MechaTronix

MechaTronix in LED

LPF3550-ZHC Pin Fin LED Cooler ø35mm



Mounting Options

Tridonic LED Modules and COB

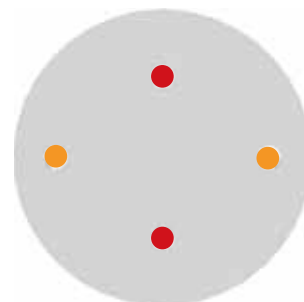
TRIDONIC

enlightening your ideas

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 Mini LES-10 Select / Classic / Art

Model names

- STARK-SLE-PURE-G3-10-xxx

Mounting

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



TALEXXmodule SLE GEN4 10mm Essence

Model names

- SLE G4 10mm 600lm xxx R SNC

Mounting

- Direct mounting with 2 screws M3 x 6mm
Red indicator marks
- With Zhaga Book 11 LED holder
Tridonic SLE G4 housing 28001038
BJB Spotlight connector 47.319.6060
Ideal Industries Chip-Lok™ holder 50-2002CT
Mounting with 2 screws M3 x 8mm
Orange indicator marks



TALEXXmodule SLE GEN5 06mm Excite / Advanced

Model names

- SLE G5 06mm 1200lm xxx x EXC/ADV

Mounting

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



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Mounting Options



TALEXXmodule SLE GEN5 15mm Excite / Advanced

Model names

- SLE G5 15mm 2000lm xxx x EXC/ADV

Mounting

- With Zhaga Book 11 LED holder
Tridonic SLE housing 28001039
Mounting with 2 screws M3 x 8mm
Orange indicator marks



TALEXX STARK SLE GEN6 10mm Advanced

Model names

- SLE G6 10mm 1200lm XXX R ADV

Mounting

- Direct mounting with 2 screws M3 x 6mm
Red indicator marks
- With Zhaga Book 11 LED holder
Tridonic SLE housing 28001038
Mounting with 2 screws M3 x 8mm
Orange indicator marks

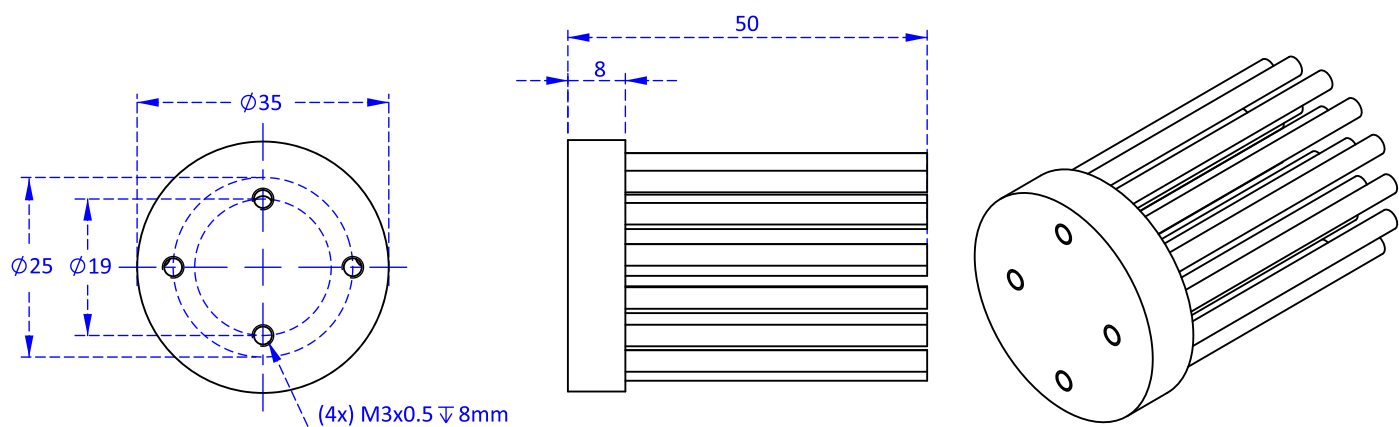
MechaTronix in LED

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Drawings & Dimensions

Example: LPF3550-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)
Dissipated Power P_d (W)	1.5	Electrical Power P_e (W)	17%	20%	25%	LPF3550-ZHC	LPF3550-ZHC
	3		1.8	1.9	2.0	10.2	15
	5		3.6	3.8	4.0	8.8	26
	7.5		6.0	6.3	6.7	7.9	40
	10		9.0	9.4	10.0	7.2	54
			12.0	12.5	13.3	6.8	68

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

— LPF3550-ZHC

