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, V 6, V 8, V 10
  - Citizen Citiled CLL022-CLU024
  - Cree XLamp CXA13, CXB13
  - Edison EdiPower II Star series, HM series HM09, HM16
  - Osram Soleriq P6
  - Prolight Opto PACE, PACB
  - Seoul Semiconductor ZC6
  - Sharp Mini Zenigata
  - Tridonic Talexx Stark SLE GEN3 Mini LES-10
- Diameter 35mm - Height 50mm
  Other heights on request
- Better performance under tilted position
- Forged from highly conductive aluminum

Order Information

Zhaga · EDISON · BJB · OSRAM Opto Semiconductors · IDEAL · ProLight Opto Technology Corporation · TE connectivity · SEOUL SEMICONDUCTOR · bridgelux · SHARP · CITIZEN Micro HumanTech · TRIDONIC enlightening your ideas · CREE

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

No.818, Dashun 2nd Rd., Sanmin Dist., Kaohsiung City 80787, Taiwan
sales@mechatronix-asia.com www.led-heatsink.com www.mechatronix-asia.com
Tel: +886-7-381-5892 Fax: +886-7-383-9293 VAT: 28600841

MechaTronix

LPF3550-ZHC Pin Fin LED Cooler ø35mm

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 avaliable 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 x (1-ηL)
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.

No.818, Dashun 2nd Rd., Sanmin Dist., Kaohsiung City 80787, Taiwan
sales@mechatronix-asia.com www.led-heatsink.com www.mechatronix-asia.com
Tel: +886-7-381-5892 Fax: +886-7-383-9293 VAT: 28600841

MechaTronix

LPF3550-ZHC Pin Fin LED Cooler ø35mm

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.

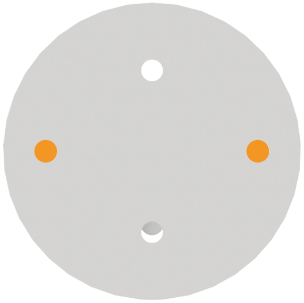
Zhaga

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 CLL022, CLU024
- Cree XLamp CXA13xx, CXA15xx
- Edison Opto HM05, HM09
- 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

Mounting

- Direct mounting with 2 M3 self tapping screws
  Orange indicator marks

No.818, Dashun 2nd Rd., Sanmin Dist., Kaohsiung City 80787, Taiwan
sales@mechatronix-asia.com www.led-heatsink.com www.mechatronix-asia.com
Tel: +886-7-381-5892 Fax: +886-7-383-9293 VAT: 28600841

MechaTronix

LPF3550-ZHC Pin Fin LED Cooler ø35mm

Mounting Options

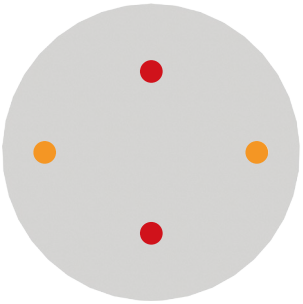
Bridgelux LED Arrays

bridgelux

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 LED Array

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

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

Bridgelux Décor Vero 10 LED Array

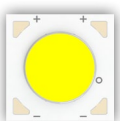
Model names
- BXRC-xxA1001-B-23
- BXRC-xxH1000-B-xx

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 10mm
  Orange indicator marks

No.818, Dashun 2nd Rd., Sanmin Dist., Kaohsiung City 80787, Taiwan
sales@mechatronix-asia.com www.led-heatsink.com www.mechatronix-asia.com
Tel: +886-7-381-5892 Fax: +886-7-383-9293 VAT: 28600841

MechaTronix

LPF3550-ZHC Pin Fin LED Cooler ø35mm

Mounting Options

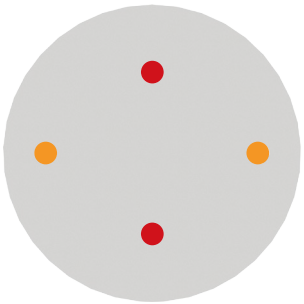
Citizen LED COB

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 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 pre-applied from MechaTronix.



Citizen Citiled CLL022 - CLU024

Model names
- CLL022-xxxx
- CLU024-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
  Ideal Industries Chip-Lok™ holder 50-2002CT
  Mounting with 2 screws M3 x 10mm
  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 10mm
  Orange indicator marks

No.818, Dashun 2nd Rd., Sanmin Dist., Kaohsiung City 80787, Taiwan
sales@mechatronix-asia.com www.led-heatsink.com www.mechatronix-asia.com
Tel: +886-7-381-5892 Fax: +886-7-383-9293 VAT: 28600841

MechaTronix

LPF3550-ZHC Pin Fin LED Cooler ø35mm

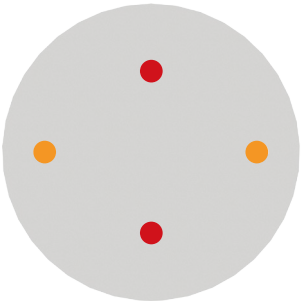
Mounting Options

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 HM

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

No.818, Dashun 2nd Rd., Sanmin Dist., Kaohsiung City 80787, Taiwan
sales@mechatronix-asia.com www.led-heatsink.com www.mechatronix-asia.com
Tel: +886-7-381-5892 Fax: +886-7-383-9293 VAT: 28600841

MechaTronix

LPF3550-ZHC Pin Fin LED Cooler ø35mm

Mounting Options

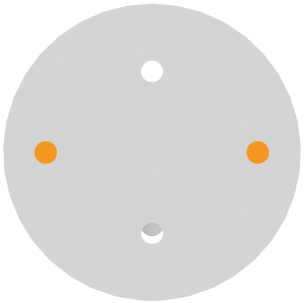
Osram Opto Semiconductors LED COB

OSRAM
Opto Semiconductors

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

Mounting indicator marks overview

MechaTronix recommends the use of a high thermal conductive interface between the LED module and the LED cooler. Either thermal grease, a thermal pad or a phase change thermal pad thickness 0.1-0.15mm is recommended. Thermal pads or phase change thermal pads can be pre-applied from MechaTronix.



Osram Soleriq 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

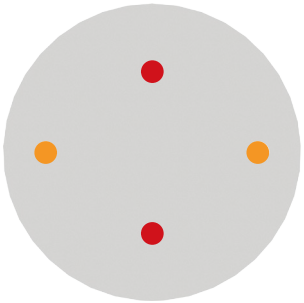
Prolight Opto LED COB

ProLight Opto
Technology Corporation

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

No.818, Dashun 2nd Rd., Sanmin Dist., Kaohsiung City 80787, Taiwan
sales@mechatronix-asia.com www.led-heatsink.com www.mechatronix-asia.com
Tel: +886-7-381-5892 Fax: +886-7-383-9293 VAT: 28600841

MechaTronix

LPF3550-ZHC Pin Fin LED Cooler ø35mm

Mounting Options

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

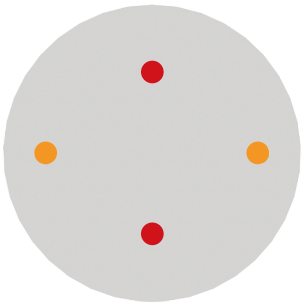
Seoul Semiconductor LED COB

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

No.818, Dashun 2nd Rd., Sanmin Dist., Kaohsiung City 80787, Taiwan
sales@mechatronix-asia.com www.led-heatsink.com www.mechatronix-asia.com
Tel: +886-7-381-5892 Fax: +886-7-383-9293 VAT: 28600841

MechaTronix

LPF3550-ZHC Pin Fin LED Cooler ø35mm

Mounting Options

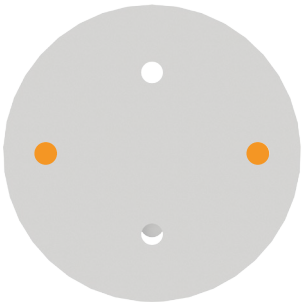
Sharp LED Modules & COB

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

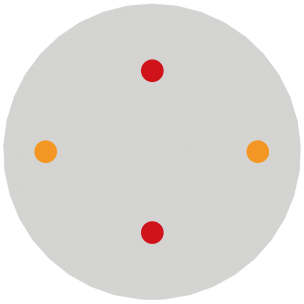
Tridonic LED Modules and COB

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.



Tridonic 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

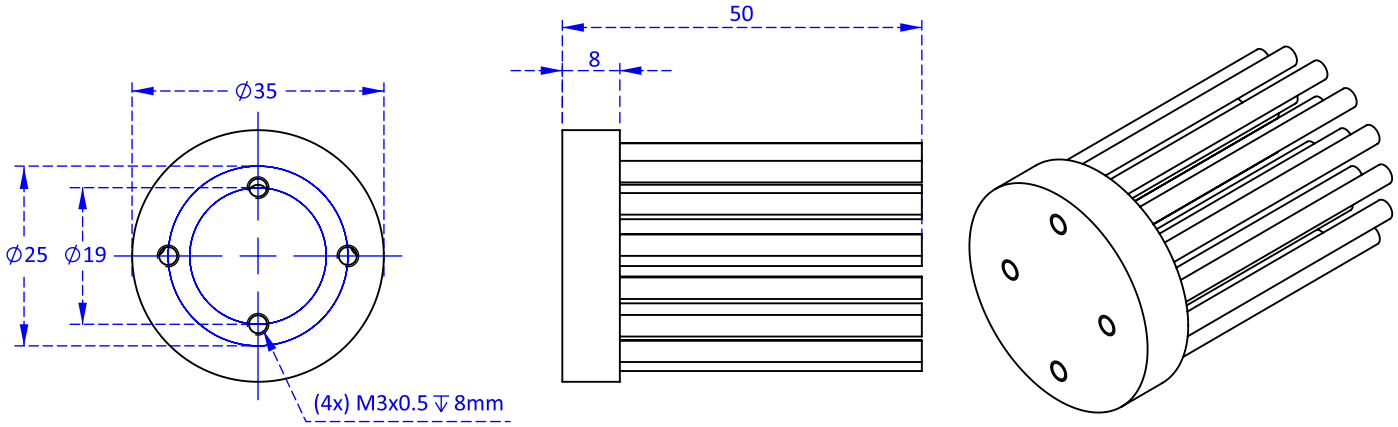
No.818, Dashun 2nd Rd., Sanmin Dist., Kaohsiung City 80787, Taiwan
sales@mechatronix-asia.com www.led-heatsink.com www.mechatronix-asia.com
Tel: +886-7-381-5892 Fax: +886-7-383-9293 VAT: 28600841

MechaTronix

LPF3550-ZHC Pin Fin LED Cooler ø35mm

Drawings & Dimensions

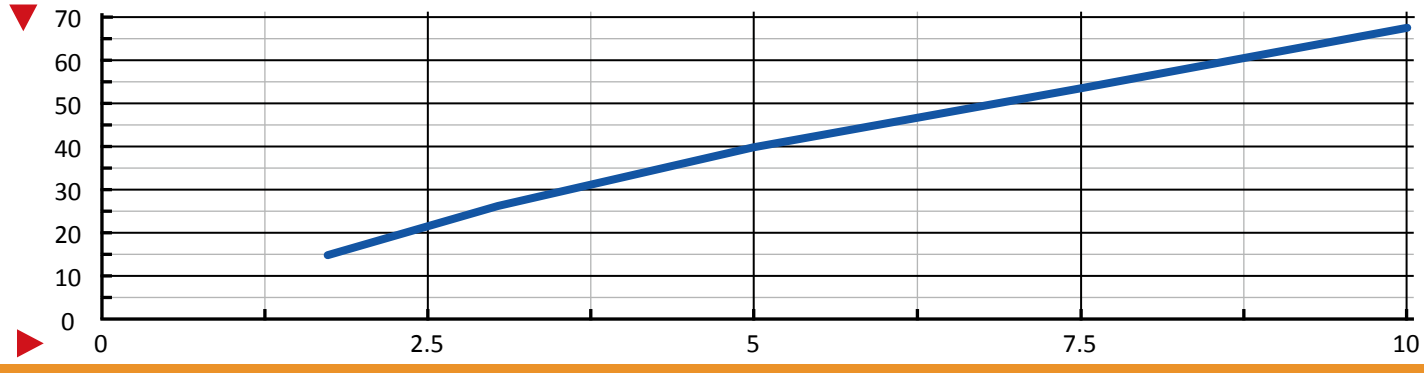
Example: LPF3550-ZHC



Thermal Data

Pd = Pe x (1-ηL)			LED Light efficiency, ηL (%)			Heat sink to ambient thermal resistance $R_{hs\text{-}amb}$ (°C/W)	Heat sink to ambient temperature rise $T_{hs\text{-}amb}$ (°C)
			17%	20%	25%	LPF3550-ZHC	LPF3550-ZHC
Dissipated Power Pd(W)	1.5	Electrical Power Pe(W)	1.8	1.9	2.0	10.2	15
	3		3.6	3.8	4.0	8.8	26
	5		6.0	6.3	6.7	7.9	40
	7.5		9.0	9.4	10.0	7.2	54
	10		12.0	12.5	13.3	6.8	68

Heat sink to ambient temperature rise $T_{hs\text{-}amb}$ (°C) — LPF3550-ZHC



Dissipated Power Pd(W)

No.818, Dashun 2nd Rd., Sanmin Dist., Kaohsiung City 80787, Taiwan
sales@mechatronix-asia.com www.led-heatsink.com www.mechatronix-asia.com
Tel: +886-7-381-5892 Fax: +886-7-383-9293 VAT: 28600841

MechaTronix