LPF8050-ZHC Zhaga standard Pin Fin LED Cooler ø80mm

Features & Benefits

- For spot and downlight designs from 1,000 to 3,000 lumen
- Thermal resistance Rth 2.34°C/W
- Modular design with mounting holes foreseen for direct mounting of a wide range of LED modules and COB's which are compliant with Zhaga Book 3 standard.
- Diameter 80mm - Standard height 50mm
  Other heights on request
- Cable guidance hole
- Better performance under tilted position
- Forged from highly conductive aluminum

Order Information

Zhaga

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 various Zhaga standard LED modules on the same LED cooler

Simple mounting with 2 screws

Recommened screw force 6lb/in

Screws are avaliable from MechaTronix

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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 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.

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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 Zhaga LED modules and COB's which standard fit on the LPF8050-ZHC 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.

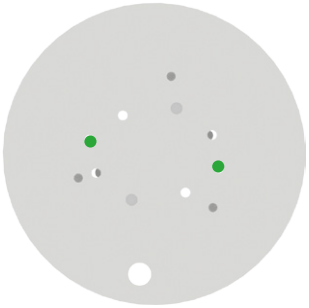
Zhaga

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 3 Spot Light Modules

Zhaga Interface Specification Book 3 defines the interfaces of LED light engines (LLEs) comprising a circular, non-socketable LED module with a separate LED driver (electronic control gear).
The circular LED modules in Book 3 have a typical diameter of 50 mm and a maximum height of 7.2 mm.
Zhaga Book 3 LED modules are mounted by 2 M3 screws evenly located on diameter of 35mm on the LED cooler.
There are four LLE categories in Book 3, which are defined by the maximum diameter of the circular light-emitting surface (LES): 9 mm, 13.5 mm, 19 mm, 23 mm.
Book 3 LLEs are suitable for spot-lighting and other applications that benefit from a small, circular source.

Zhaga book 3 compliant LED Spot Light modules *1

- Edison Edilex SLM
- Osram PrevaLED CORE
- Philips Fortimo SLM
- Sharp INTERMO
- Tridonic TALEXXmodule 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.

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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
- Citizen CitiLED CLL032, CLU034, CLU036, CLL042, CLU044, CLU046, CLU710 - CLU720 - CLU730
- Cree XLamp CXA / CXB 18xx, 25xx, 30xx
- Edison Opto HM16, HM24, HM30, HM40
- Lextar Nimbus 2000, 3000, 5000
- 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
  TALEXXmodule SLE Gen4 / Gen5 15mm

Mounting

- Direct mounting with 2 M3 screws
  Green indicator marks

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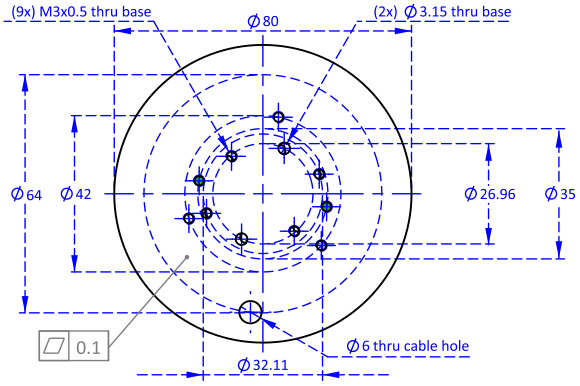
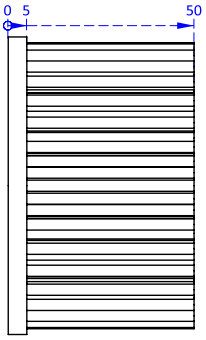
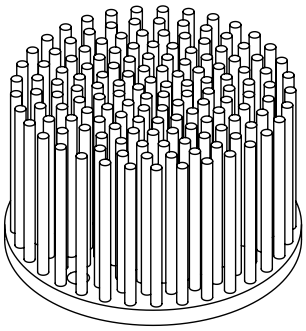
Drawings & Dimensions



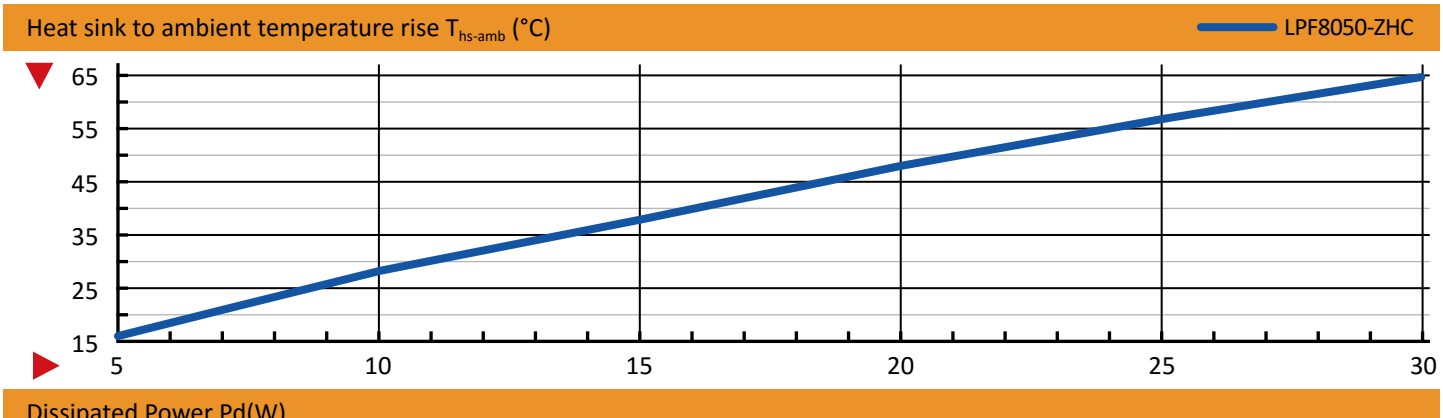


Example: LPF8050-ZHC



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%	LPF8050-ZHC	LPF8050-ZHC
Dissipated Power Pd(W)	5	Electrical Power Pe(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



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