

## ModuLED Nano | Zhaga Standard Modular Passive Star LED Cooler ø70mm

### Mounting Instruction

The ModuLED Nano 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 Nano LED cooler.

The ModuLED Nano 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 mounting instruction and the overview. For further mechanical modifications please contact MechaTronix.



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 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 maximum 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

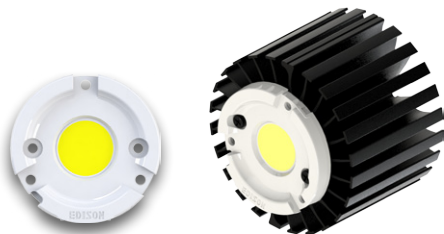
- Edison Edilex SLM
- Osram PrevaLED CORE
- Philips Fortimo SLM
- Seoul Semiconductor ACRich3
- Sharp INTERMO
- Tridonic Talexx Stark SLE
- Vexica Lumaera
- Vossloh Schwabe Luga Shop

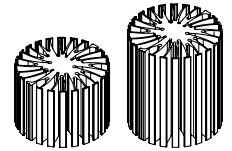
\*1 This is a non-binding overview of available Zhaga book 3 LED modules at press

#### 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 compatible LED holders can be found from BJB, TE Connectivity (Tyco), Molex and Ideal Industries.





ø70 x H50 / 80 (mm)  
Rth 2.2 - 1.8 °C/W  
Power Pd 22.7 - 28 W

[MORE PRODUCT DETAILS](#)

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#### Zhaga Book 3 Spot Light Modules

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

- ☑ Bridgelux V18, V22, Vesta Tunable White 9/13mm & Dim-To-Warm 9/15mm
- ☑ Citizen CitiLED CLU036 - CLU038, CLU710, CLU720
- ☑ Cree XLamp CXA18xx
- ☑ Edison Opto HM16, HM24, HM30
- ☑ Lextar Nimbus 2000, 3000
- ☑ LG Innotek LEMWM18 (10W, 13W, 17W, 24W)
- ☑ Nichia NFCWL036-048-060-072B, NFCWD084B-096B
- ☑ Osram Soleriq S13, S19
- ☑ Lumileds Luxeon 1203, 1204, 1205, 1208
- ☑ Prolight Opto PACF
- ☑ Samsung LC026, LC040
- ☑ Seoul Semiconductor ZC12, ZC18, ZC25, ZC40
- ☑ Sharp Mega Zenigata and Tiger Zenigata

##### 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

- ☑ Bridgelux V10, V13
- ☑ Citizen CitiLED CLU026 - CLU028, CLU700
- ☑ Cree XLamp CXA13xx, CXA15xx
- ☑ Edison Opto HM09, HM13
- ☑ Luminus CLM-9 (ACxx), CXM-9 (ACxx), CHM-9 (ACxx)
- ☑ Lextar Nimbus 1500
- ☑ Nichia NTCWT012B, NTCWS024B, NVNWS007Z, NJCWS024Z
- ☑ Osram Soleriq S13
- ☑ Prolight Opto PACE
- ☑ Seoul Semiconductor ZC6
- ☑ Sharp Mini Zenigata
- ☑ Tridonic TALEXXmodule SLE GEN1 11/15mm, SLE GEN5 06/11/15mm, SLE GEN6 10/15/17mm

##### Mounting

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