

# MechaTronix in LED

## BJB GH36d Modular Passive Star LED Cooler $\varnothing$ 99mm



### Features & Benefits

- The BJB LED star cooler GH36d is specifically designed for luminaires using the BJB GH36d series LED modules and various brands of COB LED modules mounted by BJB Zhaga Book 3 or Zhaga Book 11 LED holders.
- For spot and downlight designs from 2,000 to 6,000 lumen
- Thermal resistance Rth 1.1°C/W
- Modular design with mounting holes foreseen for direct mounting of BJB GH36d series LED modules with BJB lampholder by twist and lock system, Zhaga Book 3 and Zhaga Book 11 LED holders.
- Diameter 99mm - Standard height 80mm  
Other heights on request
- Extruded from highly conductive aluminum



### Order Information



Example : BJB LED star cooler GH36d 9980-B

BJB LED star cooler GH36d 99 **1** - **2**

- 1** Height (mm)
- 2** Anodising Color  
B - Black  
C - Clear

The BJB LED star cooler GH36d is designed in this way that you can mount various BJB GH36d series and Zhaga standard LED modules on the same LED cooler

Simple mounting with pre-tapped screw holes

Recommended screw force 6lb/in

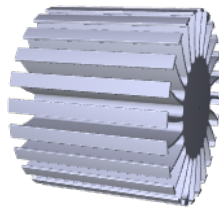
Screws are available from MechaTronix

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## BJB GH36d Modular Passive Star LED Cooler ø99mm



### Product Details



#### Model n°

BJB LED Star Cooler GH36d 9980

Dimension (mm) <sup>*1</sup>	ø99 x h80
Volume (mm <sup>3</sup> )	253767
Cooling Surface (mm <sup>2</sup> )	128386
Weight (gr)	685
Thermal Resistance (°C/W) <sup>*2</sup>	1.1
Power Pd (W) <sup>*3</sup>	45
Heat Sink Material	AL6063-T5

<sup>\*1</sup> 3D files are available in ParaSolid, STP and IGS on request

<sup>\*2</sup> 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

<sup>\*3</sup> 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

$\eta_L$  = 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.

# MechaTronix in LED

## BJB GH36d Modular Passive Star LED Cooler ø99mm



### Mounting Options

The BJB LED Star cooler GH36d is standard foreseen from a variety of mounting holes which allow direct mounting of all BJB GH36d series and Zhaga standard LED modules 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 BJB LED modules which standard fit on the BJB LED Star cooler GH36d.

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.

### BJB

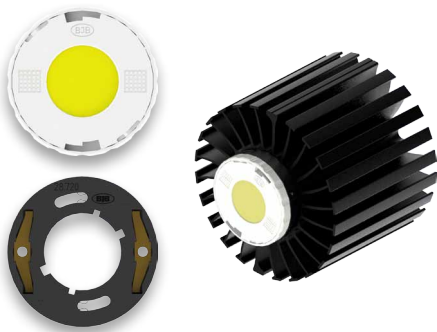
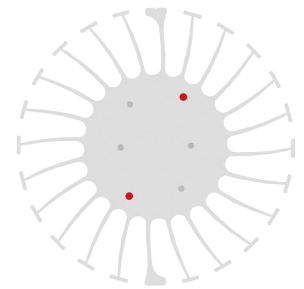


German company BJB has been in the lighting industry for 146 years and in the Taiwan market for 30 years. As the lighting industry transits from fluorescent lamps to LED, BJB is employing past technology advantages to enter the LED lighting industry, and mainly promoting LED connectors and LED lampholders.

The company has a strong customer base consisting large international lighting manufacturers, such as Philips, Osram and Toshiba. BJB emphasized it will continue to be the connection to light that leads the industry towards a bright future.

### 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.



### BJB LED Star Cooler GH36d

#### Model names

- 32.120.0002
- 32.120.0003
- 32.120.0005
- 32.120.0006
- 32.120.0008
- 32.120.0009

#### Mounting

- With BJB lampholder by twist and lock system  
BJB Lampholder 28.720.1001 / 28.720.1002 / 28.720.1003  
Mounting with 2 screws M3 x 6mm  
Red indicator marks

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## BJB GH36d Modular Passive Star LED Cooler ø99mm



### Mounting Options

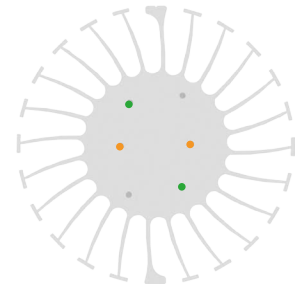
#### BJB Zhaga LED Holders



The Zhaga Consortium is developing specifications that enable the interchangeability of LED light sources made by multiple different manufacturers. 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 (LEEs) 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 mounting through the use of BJB LED holders and connectors

With the use of BJB 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.



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

- Bridgelux ES rectangular LED array
- Citizen CitiLED CLL032, CLU034, CLL042, CLU044
- Cree XLamp CXA18xx, 25xx, 30xx
- Edison Opto HM16, HM30, HM40
- Lextar Nimbus 2000, 3000
- LG Innotek LEMWM18 (10W, 13W, 17W, 24W), LEMWM28 (40W)
- Lustrous Lustron LL613F, LL620F, LL630F, LL630D, LL660D
- Nichia J216, J360, L110, L121, L204
- Osram Soleriq S13, S19, E30
- Philips Lumileds Luxeon 1203, 1204, 1205 and 1208, Luxeon K12 and K16
- Prolight Opto PABA, PACC, PACD
- Samsung LC026, LC040
- Seoul Semiconductor ZC12, ZC18, ZC25, ZC40, ZC60
- Sharp Mega Zenigata and Tiger Zenigata
- Tridonic Talexx Stark SLE Gen3 Mini LES 17

#### Mounting

- Direct mounting with 2 M3 screws
- Green indicator marks

# MechaTronix in LED

## BJB GH36d Modular Passive Star LED Cooler $\phi$ 99mm



### Mounting Options



#### 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 BJB Zhaga Book 11 LED holders are available

- Citizen CitiLED CL022, CLU024
- Cree XLamp CXA 13xx, 15xx
- Edison Opto HM05, HM09
- Lextar Nimbus 1500
- Osram Soleriq S13
- Prolight Opto PACB
- Seoul Semiconductor ZC6
- Tridonic Talexx Stark SLE Gen3 Mini LES 10

#### Mounting

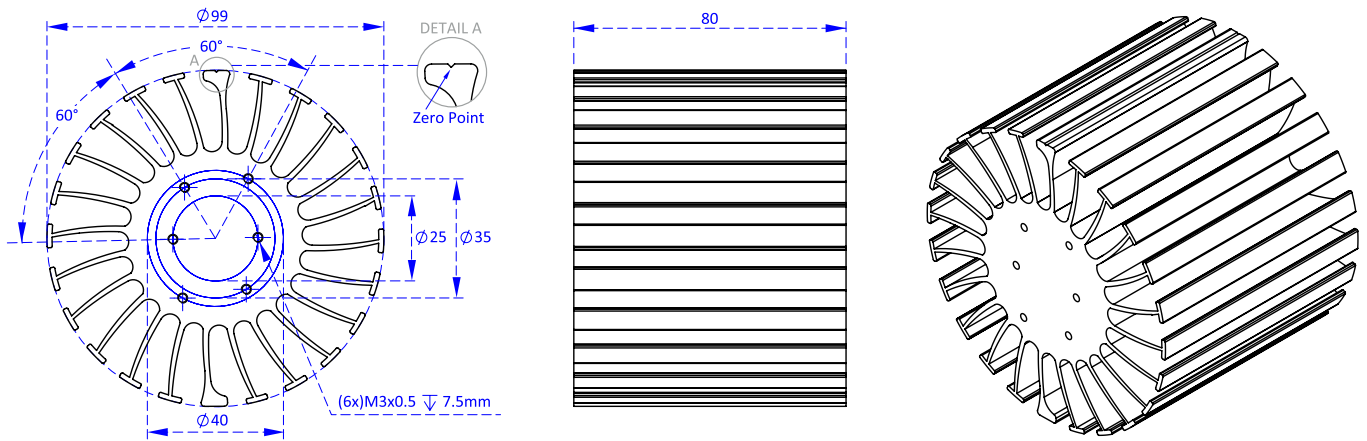
- Direct mounting with 2 M3 screws
- Orange indicator marks

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## BJB GH36d Modular Passive Star LED Cooler $\phi 99$ mm



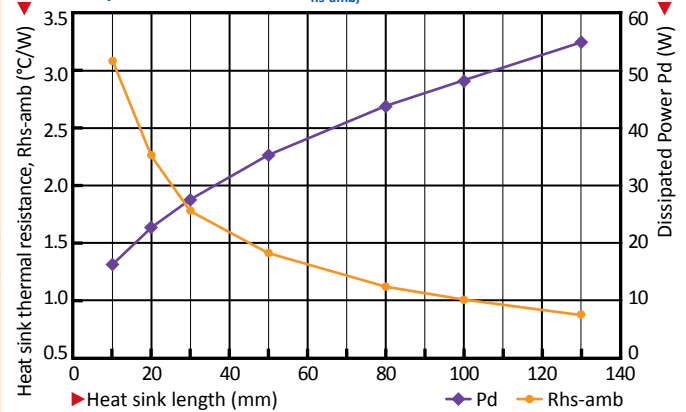
### Drawings & Dimensions



### Thermal Data

Dissipated Power Pd(W)	Heat sink to ambient thermal resistance $R_{hs-amb}$ ( $^{\circ}C/W$ )		Heat sink to ambient temperature rise $T_{hs-amb}$ ( $^{\circ}C$ )	
	BJB LED Star Cooler GH36d 9980		BJB LED Star Cooler GH36d 9980	
5	1.6	8		
10	1.4	14		
15	1.33	20		
20	1.25	25		
25	1.24	31		
30	1.2	36		
35	1.17	41		
40	1.15	46		
50	1.1	55		

BJB GH36d performance data at a heat sink to ambient temperature difference,  $\Delta T_{hs-amb}$ , of 50  $^{\circ}C$



Heat sink to ambient temperature rise  $T_{hs-amb}$  ( $^{\circ}C$ )

BJB LED Star Cooler GH36d 9980

