

Threadmount laser diode modules 635-670nm



Key features

- Visible light $\lambda = 635, 650, 670\text{nm}$
- Output power 0.9mW
- Circular output beam
- High reliability

Applications

- Industrial alignment & positioning
- Automotive alignment
- Construction industry

Options

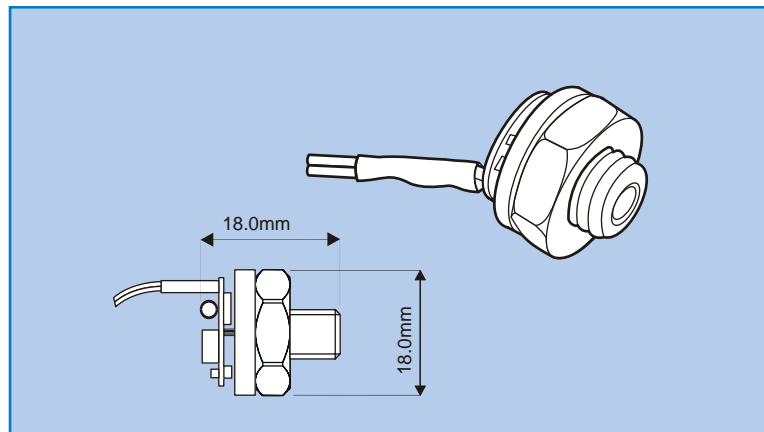
- CU-101PSV: 635nm threadmount laser module
- CU-102PSV: 650nm threadmount laser module
- CU-103PSV: 670nm threadmount laser module

635nm-670nm Circular Beam Threadmount Laser Diode Modules

The Threadmount Laser Modules produce a circular output beam of 2x2mm, with output power of 0.9mW. Operating voltage is from 4.5V to 5.5V at operating currents from 35mA to 60mA. Beam divergence is <0.6mrad and operating temperature range is -10°C to +50°C. The modules consist of an aluminium housing, laser diode, drive circuit and collimating lens.

Electrical connections are made via external flying leads. The lens is factory set to produce either a collimated beam or focused spot.

The Threadmount range of circular beam laser diode modules has been designed as a complete, low cost, laser diode system for OEM applications.



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Specifications (typical @ $t_c = 25^\circ\text{C}$)

ITEM/Part no.	CU-101PSV	CU-102PSV	CU-103PSV
Wavelength	635nm	650nm	670nm
Output Power	0.9mW	0.9mW	0.9mW
Power Stability	< 5%		
Beam Size	2x2mm		
Beam Output	Circular		
Beam Divergence	0.6mrad		
Pointing Stability	<0.2mrad/ $^\circ\text{C}$		
Bore Sighting	<2.0 $^\circ$		
Operating Voltage	4.5 - 5.5V		
Operating Current	60mA	35mA	40mA
Operating Temperature	-10 $^\circ\text{C}$ to +50 $^\circ\text{C}$		
Storage Temperature	-40 $^\circ\text{C}$ to +85 $^\circ\text{C}$		
Length (including Driver PCB)	18mm		
Diameter (including Driver PCB)	14mm		
Mounting Thread	M10x1		
Housing Material	HE30 Anodised Aluminium, Natural Finish		
Flying Lead Length	300mm		

Heat Sinking

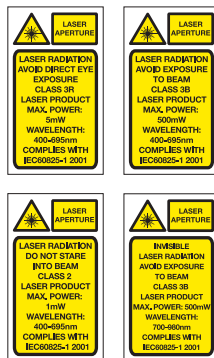
If the case temperature of the laser diode exceeds its maximum specification, premature or catastrophic failure may occur. To ensure the maximum life of the laser diode, it is recommended that an additional electrically insulated heatsink, of at least 10 sq.cm. be used. Thermal transfer cream can be used to improve contact and heat dissipation. Do not restrict air circulation around the device.

Power Connections

The Threadmount laser diode modules require a regulated input voltage of 4.5 to 5.5V. Connections are made via the 2 pre-tinned external flying leads, (red is positive, black is negative).

WARNING: The anodised housing is internally connected to the positive supply rail. Damage to the external anodised surfaces will result in the housing being at positive potential.

Specifications subject to change without notice. E&OE



Laser Safety

The light emitted from these devices has been set in accordance with IEC60825. However, staring into the beam, whether directly or indirectly, must be avoided. IEC60825 classifies laser products into three different categories depending on light emitted, wavelength and eye safety.

CLASS II

"Caution", visible laser light less than 1.0mW. Considered eye safe, normal exposure to this type of beam will not cause permanent damage to the retina.

CLASS IIIR

"Danger", visible laser light between 1.0mW and 5.0mW. Considered eye safe with caution. Focusing of this light into the eye could cause some damage.

CLASS IIIB

"Danger", infrared (IR), and high power visible lasers considered dangerous to the retina if exposed. NB: It is important to note that while complying with the above classifications, unless otherwise stated, our laser diode products are not certified and are designed solely for use in OEM products. The way in which the device is used in the final product may alter its original design classification, and it is the responsibility of the OEM to ensure compliance with the relevant standards.

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laser diode solutions