

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 currents from 35mA to 60mA. Beam divergence is <math><0.6\text{mrad}</math> and operating temperature range is -10°C to $+50^{\circ}\text{C}$. 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 and low cost laser diode system for OEM applications.

Key Features

- Complete laser diode system
- High reliability
- Available in Wavelengths from 635nm to 670nm
- Circular output beam

Key Applications

- Industrial Alignment & Positioning
- Automotive alignment
- Construction industry

Product Specifications

Specifications	
Power Stability	<5%
Pointing Stability	<0.2mrad/°C
Bore Sighting	<2.0°
Operating voltage	4.5V - 5.5V
Beam Output	Circular
Operating Temperature (non-condensing)	-10°C to + 50°C
Storage Temperature	-40°C to + 85°C
Housing Material	HE30 Anodised Aluminium, Natural Finish
Mounting Thread	M10x1
Flying Lead Length	300mm

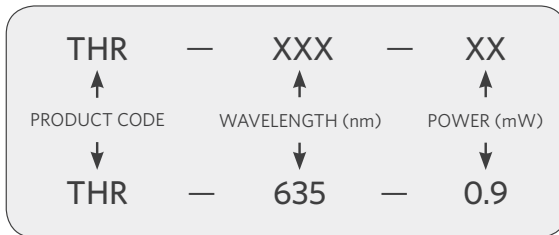
Circular Output Beam

Wavelength (nm)	Output Power (mW)	Max. Operating Current (mA)	Collimated Beam Size	Beam Divergence
635	0.9	60	2 x 2mm	0.6mrad
650	0.9	35	2 x 2mm	0.6mrad
670	0.9	40	2 x 2mm	0.6mrad

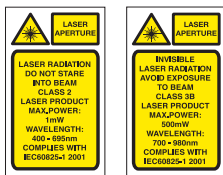
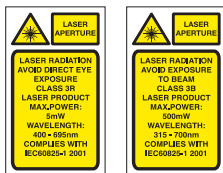
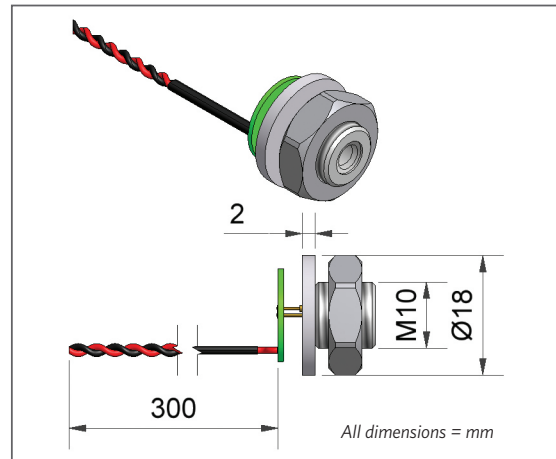
Part Numbers

To order your Threadmount Laser Diode Module use the product Code THR - Select Wavelength (XXX) - Select Power (XX).

e.g THR - 635 - 0.9



Threadmount Module



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 IIIA:** "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

Solutions for LEDs

ProPhotonix
3020 Euro Business Park, Little Island
Cork, Ireland
ledsales@prophotonix.com
Tel: +353-21-5001300

Solutions for Lasers

ProPhotonix
Sparrow Lane, Hatfield Broad Oak
Hertfordshire, CM22 7BA, UK
lasersales@prophotonix.com
Tel: +44-1279-717170

Corporate

ProPhotonix
32 Hampshire Road
Salem, NH 03079
sales@prophotonix.com
Tel: +1 603-893-8778