Compact
Laser Diode Modules

The compact laser diode modules are designed for applications where space is a key consideration. As well as their compact size they have high reliability and constant power output. The low current requirements of the modules mean they can be battery operated which makes them ideally suited to a wide variety of applications.

The compact range of modules is available with an elliptical spot output, an adjustable collimating lens, or line or cross optics at either 635 or 650nm. Optical output power options are 0.9 or 4mW as standard.

Electrical connections are made with external flying leads, requiring an operating voltage between 3 to 6V DC and an operating current at either 30mA (0.9mW output) or 40mA (4.5mW output).

The compact laser diode modules offer an unparalleled complete laser solution for OEM use where space is at a premium.

Other wavelengths and powers are available on request.

PRO PHOTONIX
www.prophotonix.com

Key Features

- Elliptical beam, line & cross generating optics available
- Compact design
- High reliability
- Wavelengths: 635nm and 650nm
- Output powers from 0.9mW to 4mW
- Hard anodised aluminium housing for electrical isolation available.

Key Applications

- Industrial Alignment
- Patient Positioning
- Laser pointers
- Light Scattering

Product Specifications

Specifications	
Power Stability	<5%
Operating Voltage	3.0 - 6.0 V
Operating Temperature (non-condensing)	-10˚C to + 40˚C
Storage Temperature	-40˚C to + 85˚C
Flying Lead Length	300mm
Wavelength (nm)	635, 650
Power (mW)	0.9, 4
Max. Operating Current (mA)	30 typ, 50 max
Housing	Brass or Hard Anodised Aluminium

Line Module	
Line thickness	1mm @1m
Fan Angle	58˚or 88˚ full angle

Elliptical Beam Module	
Collimated Beam Size	3.5mm X 1.5mm
Collimated Beam Divergence	<1mrad

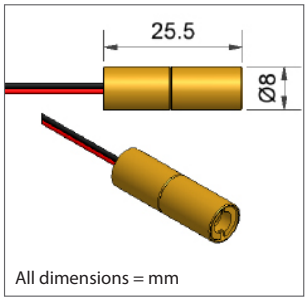
Cross Beam Module	
Line thickness	1mm @1m
Fan Angle	70˚ full angle

Part Numbers

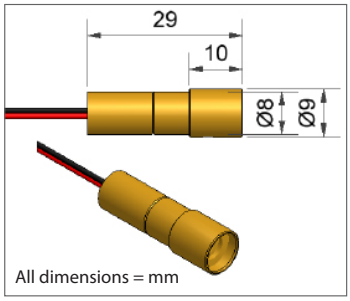
To order your Compact Laser Diode Module use the product Code COM – Select Housing (B - Brass/H - Hard Anodised) – Select Wavelength (XXX) – Select Power (XX) – Select Beam Shape (E – Elliptical/L – Line/ C – Cross) – Select Fan Angle (XX) (Fan Angle Line and Cross Optics ; XX for Spot)

e.g COM-B-635-0.9-L-58

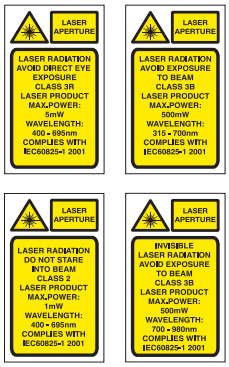
Elliptical Beam Modules



Line and Cross Modules



COM	—	B/H	—	635/650	—	0.9/4	—	E/L/C	—	58/70/88
PRODUCT CODE		HOUSING		WAVELENGTH (nm)		POWER (mW)		BEAM SHAPE		FAN ANGLE
COM	—	B	—	635	—	0.9	—	E	—	58



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 35 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 Compact laser diode modules require a regulated input voltage of 3.0-6V DC. Connections are made via the 2 pre-tinned external flying leads (red is positive, black is negative).

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 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 (IIR), and high power visible laser 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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