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 520, 635 or 650nm. Optical output power options are 0.9 or 4mW as standard.

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.

Key Features

- Now available in Green (520nm)
- Elliptical beam, line & cross generating optics available
- Compact design
- High reliability
- Wavelengths: 520nm, 635nm and 650nm
- Optical 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

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Typical Characteristics

	635, 650nm	520nm
Power Stability	<5%	
Operating Voltage	3.0 - 6.0 V	9.0V
Operating Temperature (non-condensing)	-10˚C to + 40˚C	
Storage Temperature	-40˚C to + 85˚C	
Flying Lead Length	300mm	
Wavelength (nm)	635, 650	520
Optical Output Power (mW)	0.9, 4	
Max. Operating Current (mA)	30 typ, 50 max	75 typ
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

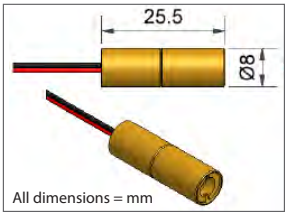
Cross Beam Module	
Line thickness	1mm @1m
Fan Angle	70˚ full angle

Part Numbers

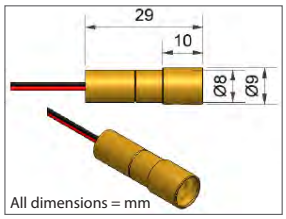
To order your Compact Laser Diode Module use the product Code COM – Select Housing (B - Brass/H - Hard Anodised) – Select Wavelength (XXX) – Select Output Power (XX) – Select Beam Shape (E – Elliptical/L – Line/ C – Cross) – Select Fan Angle (XX) (Fan Angle Line and Cross Optics ; XX for Spot)

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

Elliptical Beam Modules



Line and Cross Modules



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

Laser Safety Information

The light emitted from these devices has been set in accordance with IEC EN 60825-1:2007. However, staring into the beam, whether directly or indirectly must be avoided. It is recommended that the user wears appropriate laser safety glasses. Our laser modules are classified into one of the IEC EN 60825-1:2007 classifications shown below, depending on the wavelength and power.

Class 1

This class is eye-safe under normal operating conditions.

Class 1M

This class of visible laser (500-700nm) is safe for viewing directly with the naked eye, but may be hazardous to view with the aid of magnifying optics such as microscopes and telescopes.

Class 2

This class of visible laser (400-700nm) is safe for accidental viewing under all operating conditions. However, it may not be safe for a person who deliberately stares into the laser beam for longer than 0.25 s, by overcoming their natural aversion response to the very bright light.

Class 2M

This class of visible laser (400-700nm) is safe for accidental viewing with the naked eye, as long as the natural aversion response is not overcome as with Class 2, but may be hazardous (even for accidental viewing) when viewed with the aid of optical instruments, as with class 1M.

Class 3B

Radiation in this class is hazardous if the eye is exposed directly. The AEL for a continuous wave laser in the wavelength range 315nm to far infrared is 500mW. For pulsed lasers between 400 and 700 nm, the limit is 30mJ. The radiation can be a hazard to the eye or skin. Class-3B lasers must be equipped with a key switch and a safety interlock.

Class 3R

Radiation in this class is considered low risk, but potentially hazardous. The class limit for 3R is 5x the applicable class limit for Class 1 (for invisible radiation) or class 2 (for visible radiation).

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 their products comply with the relevant standards.

Errors & Omissions Excepted. The information describes the type of product and shall not be considered as assured characteristics.

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