

Compact Laser Diode Modules



From just 8mm in diameter, the Compact Laser Diode Modules offer an unparalleled complete laser solution for OEM use where space is at a premium.

Designed for applications where space is a key consideration, these laser modules offer a compact, highly reliable solution. Following a recent upgrade, this laser platform offers excellent boresighting for improved accuracy and ease of installation along with a new TTL modulation option.

The improved Compact Laser Modules are well suited for a wide range of medical and industrial alignment, barcode scanning, targeting and 3D measurement applications. In addition, the low current requirements of the modules mean the lasers can be battery operated in a handheld device.

The Compact range of laser modules is available with a collimated or focused elliptical spot output, or line or cross optics at 520nm, 635nm or 650nm. Optical output power options are 0.9mW or 4mW as standard.

Other wavelengths and powers are available on request.

Key Features

- Elliptical Beam, Line & Cross Generating Optics Available
- Compact Design
- CW or TTL Modulation Options
- Excellent Boresighting $<0.5^\circ$
- 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
- Barcode scanning
- Targeting
- 3D Measurement

Typical Characteristics

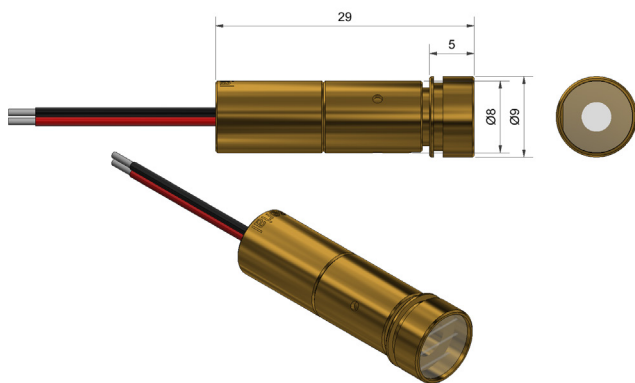
	635, 650nm	520nm
Power Stability	<5%	
Operating Voltage	3.0 - 6.0 V	9.0V
Operating Temperature (non-condensing)	-10°C to + 40°C	
Storage Temperature	-40°C to + 85°C	
Flying Lead Length	300mm	
Wavelength (nm)	635, 650	520
Optical Output Power (mW)	0.9, 4	
Max. Operating Current (mA)	30 typ, 50 max	75 typ
Housing	Brass or Hard Anodised Aluminium	
Boresighting	<0.5°	

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

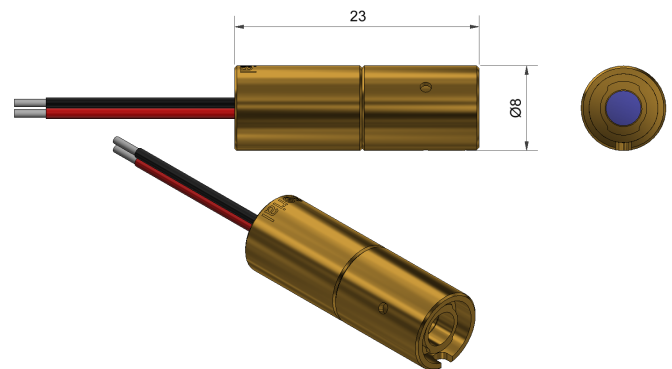
Elliptical Beam Module	
Collimated Beam Size	3.5mm X 1.5mm
Collimated Beam Divergence	<1mrad

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

Line and Cross Modules



Elliptical Beam Modules



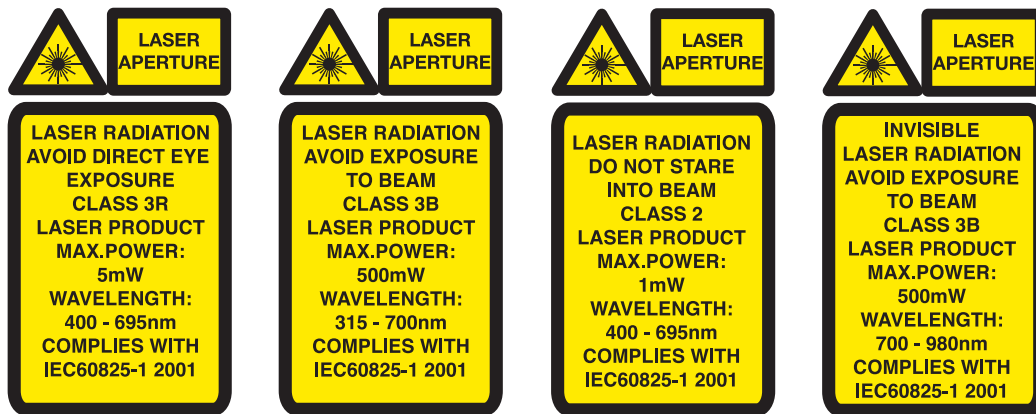
Features	Benefits
From 8mm in Diameter	Ideally suited where space is a key consideration.
TTL Modulation Options	Strobing option now available to suit application requirements.
Excellent Bore-Sighting <0.5°	Improved accuracy and ease of installation
High Reliability	Repeatable results and maximum system uptime.
Three Wavelengths	Laser configured to your applications needs.
Elliptical Beam, Line & Cross Generating Optics Available	Output can be configured for a range of application needs.
Hard Anodised Aluminium Housing Option	For Electrical Isolation and a more durable module.

Part Numbers

To order your Compact Laser Diode Module use the product Code CM - Select Housing (B - Brass/H - Hard Anodised) - Select Wavelength (635, 655 or 520) - Select Output Power (0.9 or 4) - Select Beam Shape and Fan Angle (EXX - Elliptical, L58 - Line with 58° Fan Angle, L88 - Line with 88° Fan Angle or C70 - Cross with 70° Fan Angle) -Select Modulation Option - Modulated or Continuous Wave (M or C), Select Focus Option - Focused at 1m or Collimated (F or C) e.g CM-B-635-4-EXX-M-C

CM	—	B/H	—	XXX	—	0.9 / 4	—	EXX/L58/L88/C70	—	M/C	—	F/C
↑		↑		↑		↑		↑		↑		↑
Product code		Housing		Wavelength (nm)		Output Power (mW)		Beam Shape and Fan Angle		Modulation		Focus Option
↓		↓		↓		↓		↓		↓		↓
CM	—	B	—	635	—	0.9	—	EXX	—	C	—	C

Focused elliptical beam, line and cross-generating Compact Lasers are focused at 1m. Other focus distance options are available on request



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.

NB. Without the inclusion of laser drive circuits, the output powers cannot be set in accordance with EN60825 since they are designed for OEM use and not certified devices as defined in the specification. The manufacturer of the complete laser product is responsible for complying with the requirements of EN60825. 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 35sq. cm. be used. Thermal transfer paste can be used to improve contact and heat dissipation. Do not restrict air circulation around the device. Specifications subject to change without notice.

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

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