



**PHOTONIC
PRODUCTS**

a StockerYale company



Compact 88° line laser diode module 650nm

Key features

- Visible light $\lambda = 650\text{nm}$
- Output powers 0.9mW, 4.0mW
- 88° line output
- 8mm diameter, 29mm length
- High reliability

Applications

- Industrial alignment
- Patient positioning

650nm Compact 88° Line Laser Diode Modules

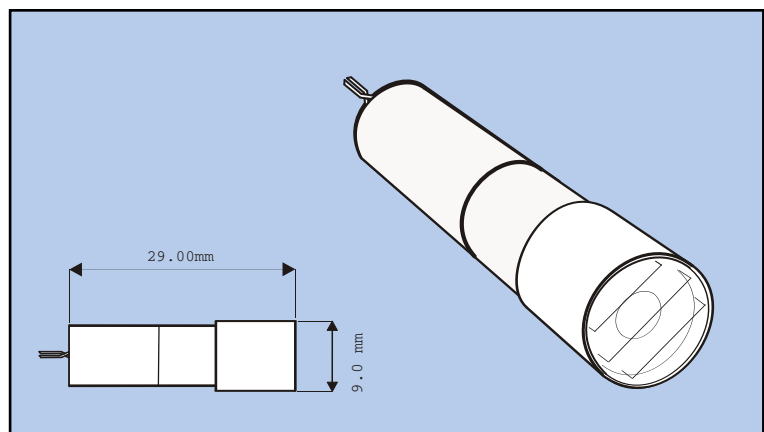
The 650nm Compact Line Laser Diode Modules produce an 88° line output, with output powers of 0.9mW or 4.0mW. Operating voltage is from 3V to 6V DC at an operating current of 30mA typ (0.9mW) or 40mA typ.(4mW). Operating temperature range is -10°C to +40°C.

The modules consist of a brass housing, laser diode, drive circuit and line generating optics.

Electrical connections are made via external flying leads. The output is factory focused at 1m which provides a useable line up to 1500mm.

Focus can be set at other distances to order.

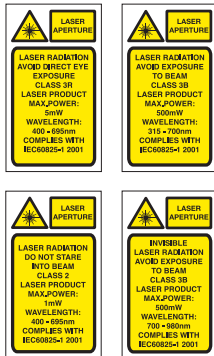
The Compact range of line laser diode modules has been designed as a complete laser diode solution for OEM use.



compact 88° line laser diode module 650nm

Specifications (typical @ tc = 25°C)

| Part no. | 300-0229-00 | 300-0232-00 |
|---|--|------------------------|
| Wavelength | 650nm typ., 660nm max | 650nm typ., 660nm max |
| Output Power | 0.9mW ±5% @ 25°C | 4mW ±5% @ 25°C |
| Power Stability | < 5% | < 5% |
| Output Structure | line 88° full angle | line 88° full angle |
| Focus Distance (other distance can be set to order) | 1m | 1m |
| Operating Voltage (DC) | 3.0-6.0V | 3.0-6.0V |
| CW Operating Current | 30mA typ., 45mA max | 40mA typ., 50mA max |
| Operating Temperature (non-condensing) | -10°C to +40°C | -10°C to +40°C |
| Storage Temperature | -40°C to +85°C | -40°C to +85°C |
| Length | 29mm | 29mm |
| Diameter | 8mm (9mm for lens cap) | 8mm (9mm for lens cap) |
| Housing Material | Brass | Brass |
| Flying Lead Length | 300mm | 300mm |
| Circuit Protection | Static, Surge and Reverse Polarity Protected | |



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.

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 3V-6V DC. Connections are made via the 2 pre-tinned external flying leads, (red is positive, black is negative). Modules with modulation have 3rd yellow wire.

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

Specifications subject to change without notice. E&OE



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