



## Standard laser diode collimator

### Key features

- Elliptical output beam
- Lens material PMMA
- Lens focal length 4.60mm
- Lens back focal length 2.80mm
- Adjustable focus
- Accepts TO-5 (9mm) laser diode packages
- High reliability

### Applications

- Industrial and automotive alignment
- Positioning and sensing
- Bar code scanning
- Process control
- Machine vision
- Targeting applications

### SLDC-2 Standard Laser Diode Collimator

The SLDC-2 produces an elliptical output beam of approximately 3.5 x 1.5mm with lens focal length of 4.60mm, lens back focal length of 2.80mm, numerical aperture of 0.47, and adjustable focus. The lens material is PMMA.

The SLDC-2 standard laser diode collimator has been designed as a complete low cost, high volume system for OEM use.

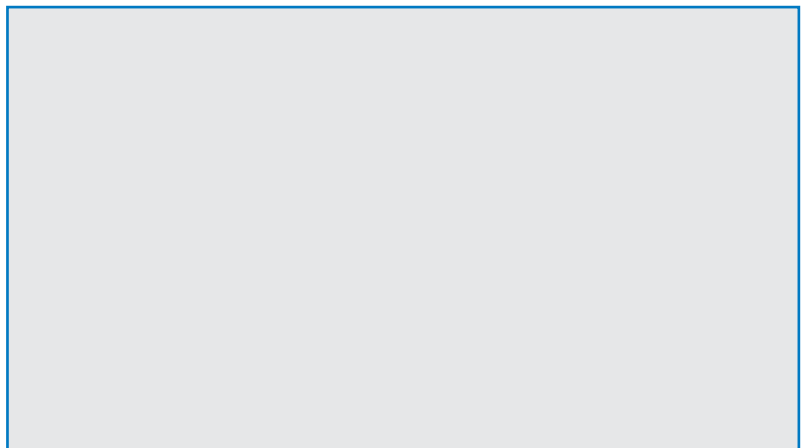
It consists of a nickel silver housing and a collimating lens in a lightweight, cylindrical package.

Electrical connections are made via the laser diode pins.

The lens may be factory set to produce either a collimated beam or focused spot.

Line generating optics are also available.

Direct access to the laser diode and photodiode connections provide maximum flexibility in the configuration of the electrical interface. Drive electronics can be supplied if required.



## Standard laser diode collimator

### Optical, Electrical & Mechanical Characteristics (Tc = 25°C)

Part no. SLDC-2	Typ.	Unit	
Beam Size (1/e <sup>2</sup> measured at lens)	4.0 x 1.5	mm	(depending on laser diode fitted)
Lens Focal Length	4.60	mm	
Lens Back Focal Length	2.80	mm	
Numerical Aperture	0.47	NA	
Lens Material	PMMA		
Focus	Adjustable		
Laser Diode Packages accepted	TO-5 (9mm)		
Length (excluding laser diode pins)	16.50-19.00	mm	(depending on focus position)
Diameter	11.0	mm	
Housing Material	Nickel Silver		
Finish	Natural		

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.

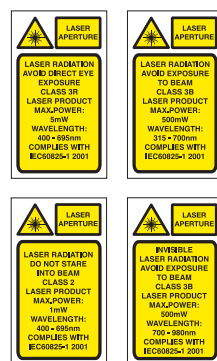
Manufacturers of products using laser diode collimators should be fully familiarised with EN60825 before using such devices.

#### 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.

**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.

#### PHOTONIC PRODUCTS UK LIMITED

Pierce Williams, Sparrow Lane  
 Hatfield Broad Oak, Hertfordshire CM22 7BA, UK  
 Telephone: +44 (0) 1279 717170  
 Facsimile: +44 (0) 1279 717171  
 E-mail: [sales@photonic-products.com](mailto:sales@photonic-products.com)  
[www.photonic-products.com](http://www.photonic-products.com)

#### PHOTONIC PRODUCTS USA

Telephone: +1 714-841-1960  
 E-mail: [salesusa@photonic-products.com](mailto:salesusa@photonic-products.com)

#### PHOTONIC PRODUCTS GERMANY

Telefon: +49 (0) 8142 / 669 8364  
 E-mail: [salesgermany@photonic-products.com](mailto:salesgermany@photonic-products.com)  
[www.photonic-products.com](http://www.photonic-products.com)



**PHOTONIC**  
 PRODUCTS