Global Laser

LDM125 Datasheet

Ø11mm with 25mm Flange

Low Powered Laser Diode Module

LDM125

The LDM125 is an 11mm diameter laser diode module with a 25mm mounting flange with two threaded holes to assist in mounting and alignment. The mounting flange also provides a greater surface area for improved heat sinking of the module.

Available in wavelengths of 520, 635, 650, 670, 780 & 850nm with power up to 5mW as standard. It requires an operating voltage of 5Vdc (520nm require 10Vdc) and features an isolated body. As a further enhancement the LDM125 can be fitted with a TTL modulation input with a bandwidth up to 100Khz (red and IR models only).

A choice of two collimating lens are offered. The "G" model uses a glass lens with an elliptical output beam, whilst the "P" model uses a plastic lens which produces a circular output beam with a lower beam divergence. Both models have user adjustable focus. Both models have user adjustable focus.

Optical Information

The LDM125 laser diode modules are available with the following lens types.

G Lens Type (Glass Lens)

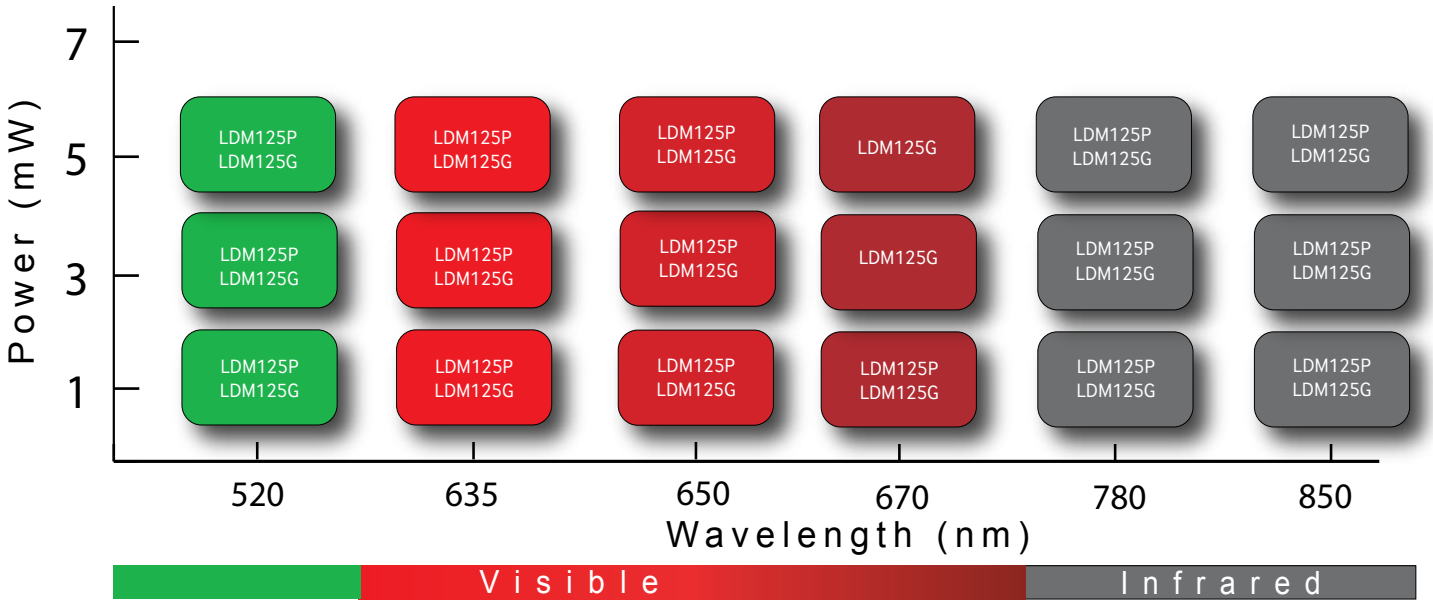
The glass lens is a high quality lens producing fine spots. The lens provides high stability over extremes of temperature and is immune to damages such as scratches.

P Lens Type (Plastic Lens)

The long focus plastic lens with a low numerical aperture yields good quality circular collimated beams over larger distances.

Product Matrix

Customised Versions:- If the power or wavelength you require is not listed below then please contact your local distributor or Global Laser directly.



Specifications

	G Lens	P Lens
Mechanical Information		
Mass (grams)	14.2	15.8
Dimensions (mm)	Ø11 x 46	Ø11 x 57
	Mounting Flange 25 x 11 Mounting Holes M3 Thread	
Housing Material	Black Anodised Aluminium	
Power Stability Over Temperature	±2%#	
Focus	User Adjustable	
Isolated Body	Yes	
Input leads	2 Leads, / Red (+Ve) /Black (0 V)/Yellow (Optional TTL - Red & IR Model Only)	
Lead Length (mm)	200	
Optional TTL Modulation - Bandwidth (Khz)	100 (Typical)	
Optional TTL Modulation - Rise Time (µs)	≤5	
Optical Information		
Diode Power (mW)	1, 3 & 5	
Wavelength (nm)	520 to 850	
Focus Range	35mm to Infinity	150mm to Infinity
Beam Size at Aperture (Typical) (mm)	4 x 2	5 x 5
Beam Divergence (Typical) (mrad)	<0.5	<0.5
Beam Size @ Nearest Focus (1e2) (µm)	<25	<50
Bore Sighting (mrad)	≤20	≤10

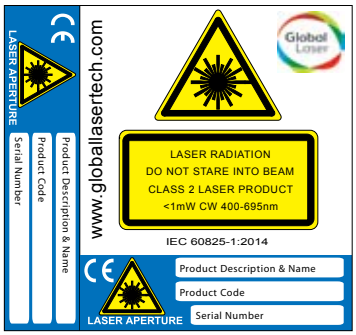
Environmental Information						
	520nm	**635nm**	**650nm**	**670nm**	**780nm**	**850nm**
Operating Case Temperature (°C)	-10 to +55*	-10 to +45*	-10 to +45*	-10 to +55*	-10 to +55*	-10 to +55*
Storage Temperature (°C)	-20 to +85	-40 to +85	-40 to +85	-40 to +85	-40 to +85	-40 to +85
Operating Humidity (%RH)	90	90	90	90	90	90
MTTF @ 25°C (hrs)	≥40,000	≥30,000	≥50,0000	≥120,000	≥90,000	≥88,000

Electrical Specifications		
	Green Models	**Red & IR Models**
Input Voltage (Vdc)	+10 ±5%	+3.5 to +5.0
Input Voltage GND (Vdc)	0	
Reverse - Polarity	Yes	
Typical Operating Current (mA)	20 to 140*	
Connector Type	Flying Leads	

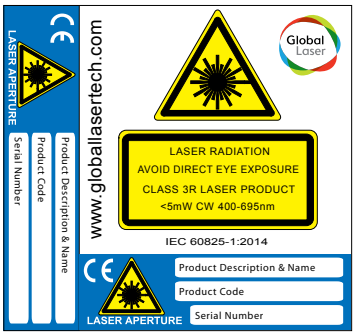
NOTES
* The operating temperature range is dependant on the laser diode fitted. The quoted information is the minimum range. Some powers may have a wider operating temperature range. Please contact us for temperature range for individual models.
# Varies with laser diode type and output power. This data is based on the LDM125G/635/1.
All specifications are typical @ 25°C

Laser Safety

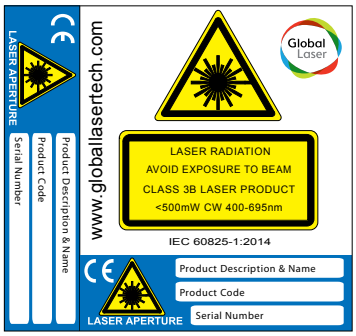
Our laser diode modules are compliant to IEC 60825-1: 2014 standards. The lasers will fall within one of the following classifications depending on power and wavelength. The labels supplied with the units are shown below.



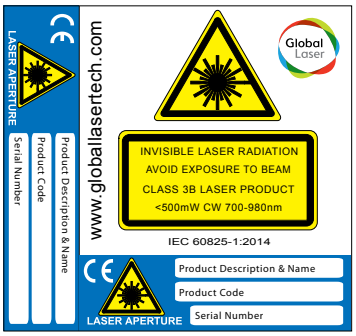
Class 2 Laser Label



Class 3R Laser Label



Class 3B Laser Label



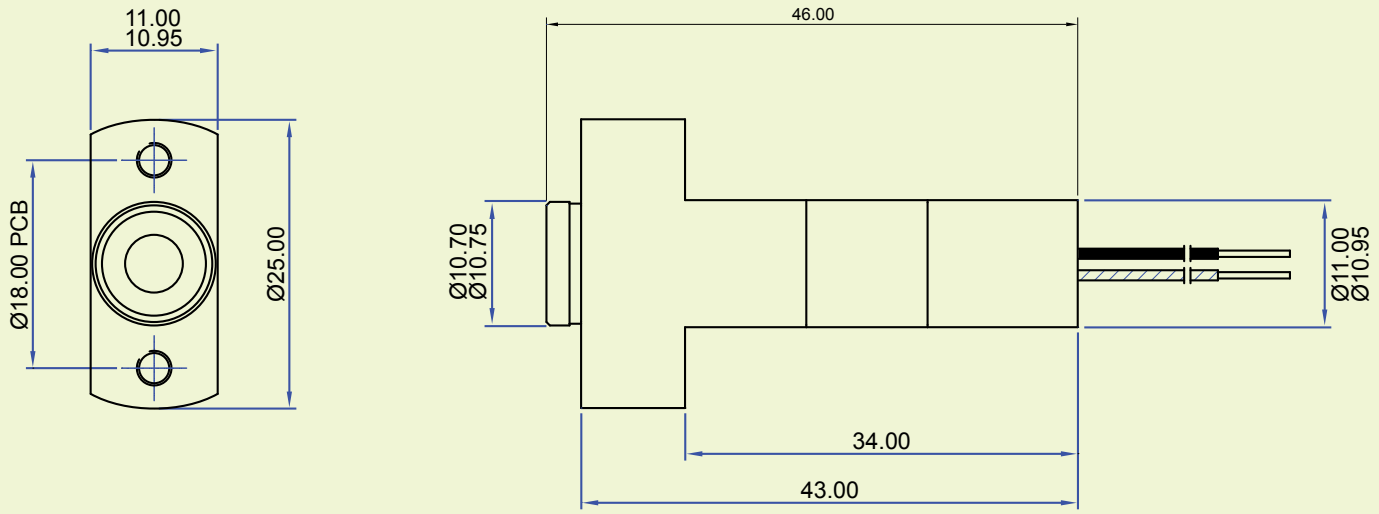
Class 3B IR Laser Label

Quality & Warranty

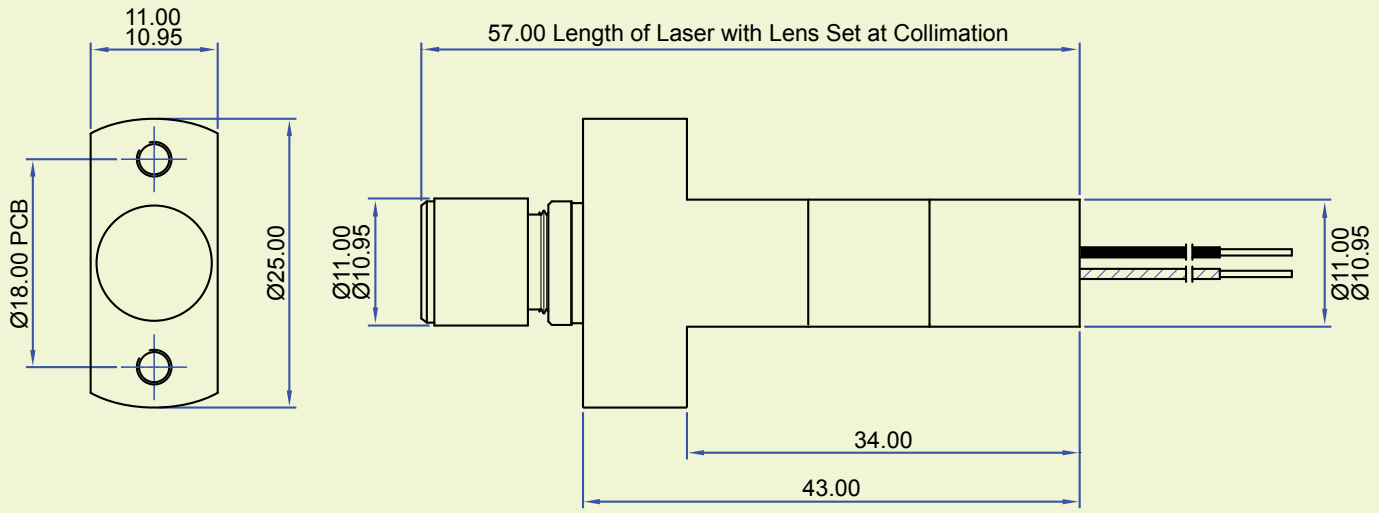
The LDM125 is supplied with a 12 month parts and labour warranty. Our manufacturing operations are certified to ISO9001.

Mechanical Drawings

LDM125 with G Lens Outline



LDM125 with P Lens Outline



Drawings not to scale

Please note: Global Laser reserve the right to change descriptions and specifications without notice.

ISO9001 Certified

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