Global Laser

LDM127 Datasheet

19x34mm Oblong Housed
Low Powered Laser Diode Module

LDM127

The LDM127 laser module features a 19 by 34mm oblong housing which allows the user to reference align the front or side of the laser module to a flat mounting surface. The optical axis is also aligned to the housing.

The front surface and one side surface of the LDM127 have four mounting holes which can be used for securing the laser to the mounting surface. The flat surfaces of the module allow for superior heat sinking of the laser compared to conventional cylindrical laser modules.

The LDM127 is available in wavelengths' of 520, 635, 650, 670, 780 & 850nm with power up to 5mW as standard. It requires an operating voltage of 5Vdc (red & infrared models) or 10Vdc (green models) and features an electrically isolated body. As a further enhancement the LDM127 can be specified with a TTL modulation input with a bandwidth up to 100KHz.

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

Optical Information

The LDM127 laser modules are available with the following lens types.

G Lens Type (Glass Lens)

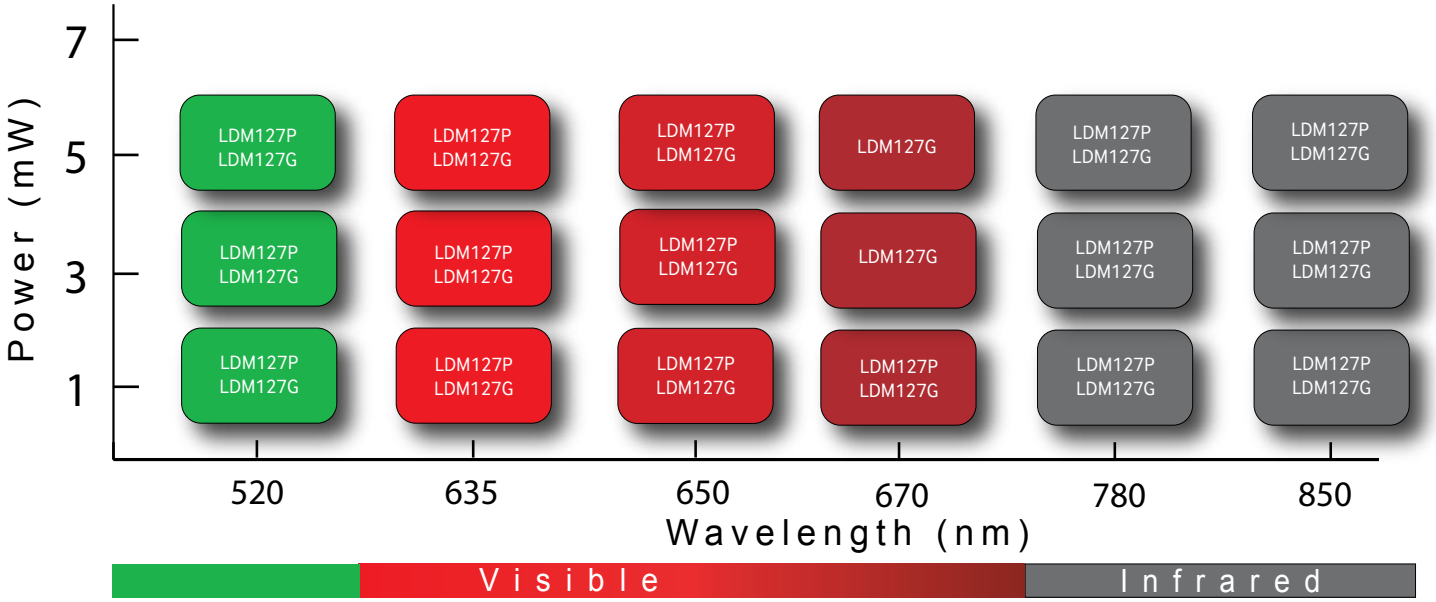
The glass lens is a high quality lens producing fine spots. The lens provides high stability over extremes of temperature and is immune to damages such as scratches.

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)	35	35
Dimensions (mm)	WxHxD 19x19x37	WxHxD 19x19x47
	Mounting Hole M3 Clearance (tapped)	
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)	215	
Optional TTL Modulation - Bandwidth (Khz)	100	
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

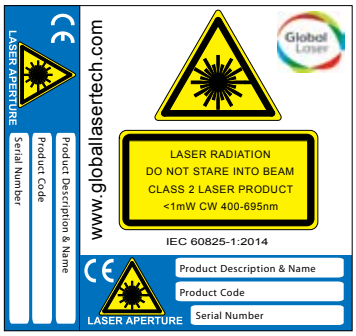
Environmental Information						
	520nm	**635nm**	**650nm**	**670nm**	**780nm**	**850nm**
Operating Case Temperature (°C)	-10 to +55*	-10 to +45*	-10 to +45*	-10 to +55*	-10 to +55*	-10 to +55*
Storage Temperature (°C)	-20 to +85	-40 to +85	-40 to +85	-40 to +85	-40 to +85	-40 to +85
Operating Humidity (%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 LDM127G/635/1.
All specifications are typical @ 25°C

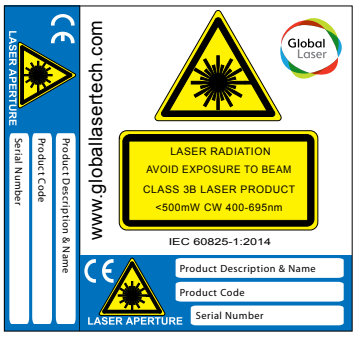
Laser Safety

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.

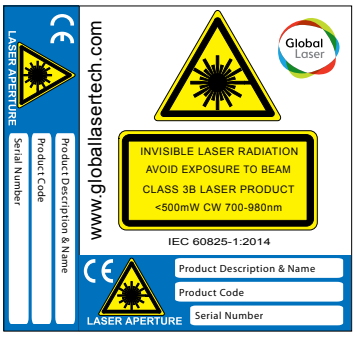


Class 2 Laser Label

Class 3R Laser Label



Class 3B Laser Label



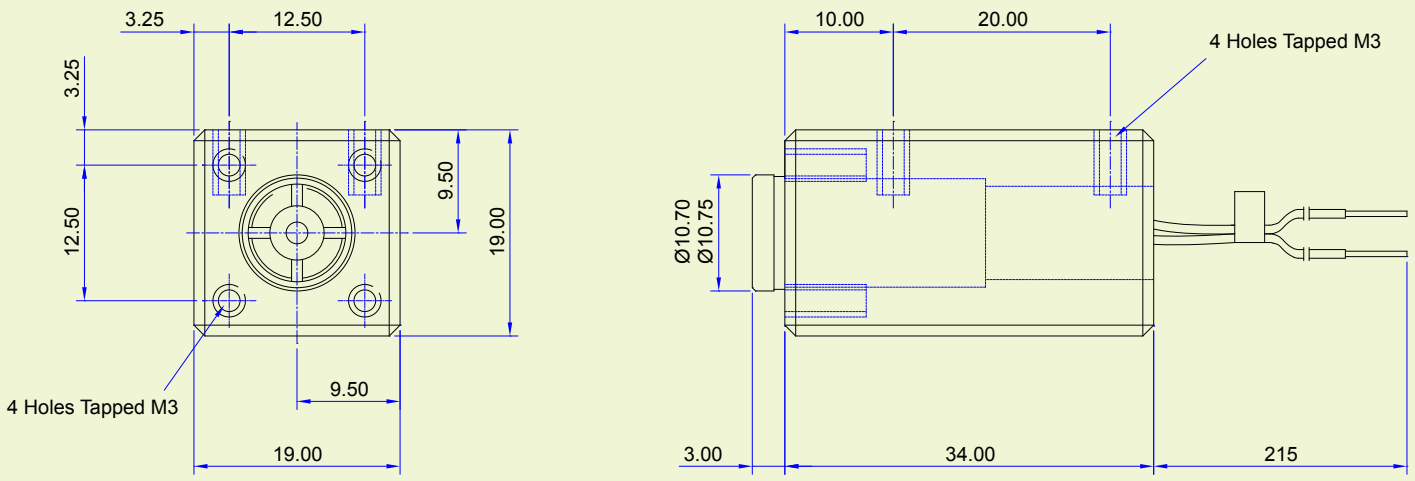
Class 3B IR Laser Label

Quality & Warranty

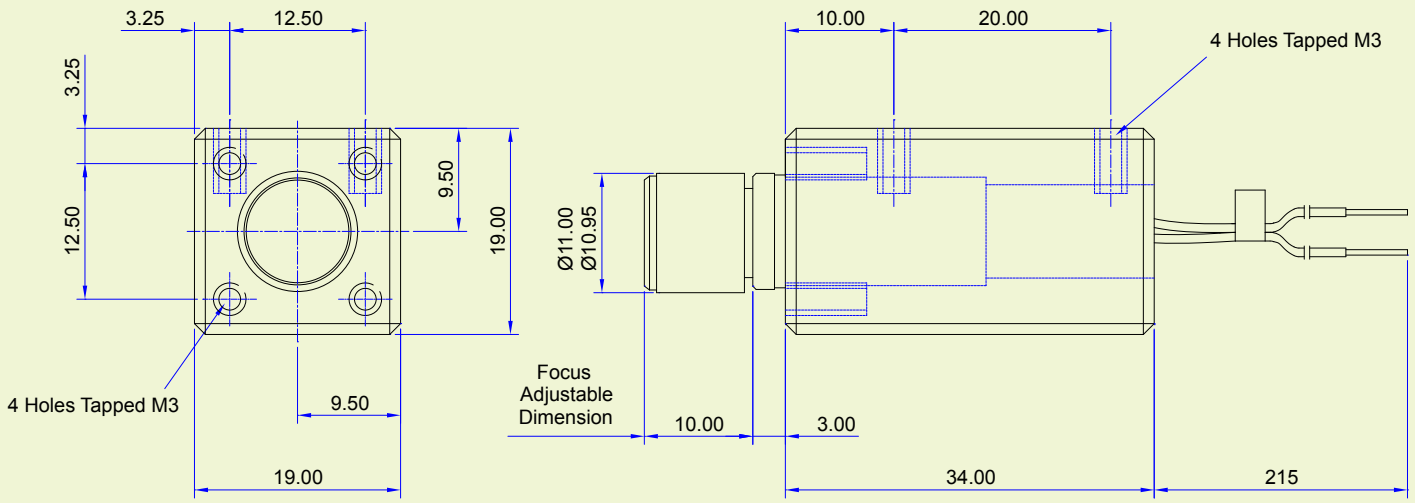
The LDM127 is supplied with a 12 month parts and labour warranty. Our manufacturing operations are certified to ISO9001.

Mechanical Drawings

LDM127 with G Lens Outline



LDM127 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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