



LDM126 Datasheet

*Rectangular Housed
Low Powered Laser Diode Module*

LDM126



The LDM126 laser module features a 25 by 14mm rectangle housing which provides the user with a compact low profile laser module which also allows the user to reference the laser module to a mounting surface. The optical axis is aligned to the housing.

Two M3 mounting holes allow the user to secure the laser module surface to the mounting surface. The flat surfaces of the LDM126 give superior heat sinking when compared to conventional cylindrical laser diode modules. The anodised aluminium housing is isolated from the supply voltage.

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 requires 10Vdc) and features an isolated body. As a further enhancement the LDM126 can be supplied 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 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 LDM126 laser diode modules are available with the following lens types.

G Lens Type (Glass Lens)

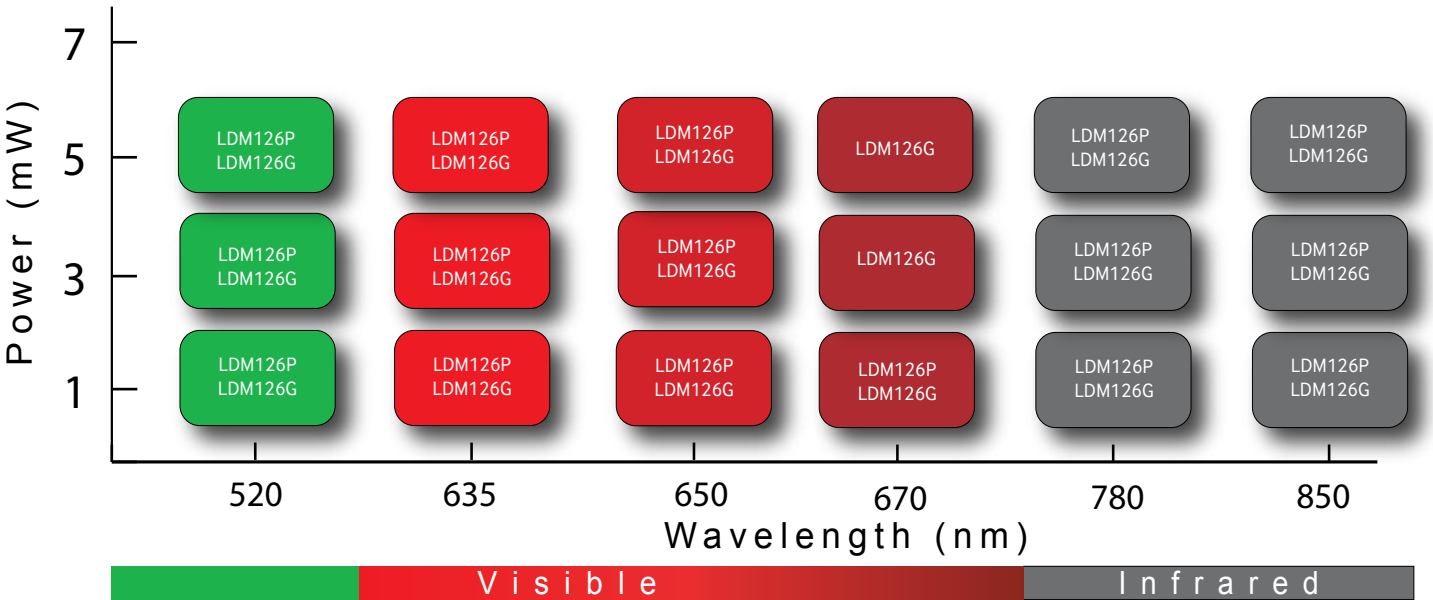
The glass lens is a high quality lens producing fine spots. The lens provides high stability over extremes of temperature and is immune to damages such as scratches.

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.

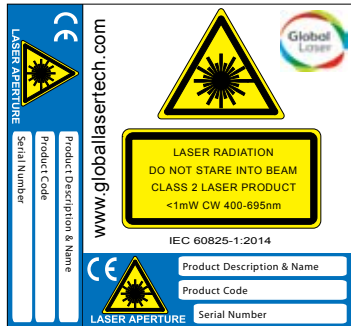


Specifications

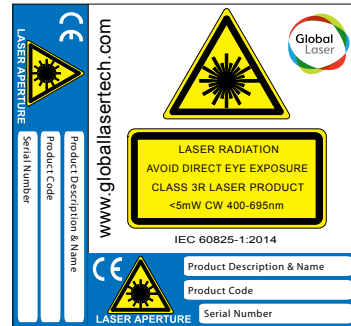
	G Lens			P Lens		
Mechanical Information						
Mass (grams)	30			35		
Dimensions (mm)	WxHxD 25x14x37			WxHxD 25x14x47		
	Mounting Hole M3 Clearance					
Housing Material	Black Anodised Aluminium					
Power Stability Over Temperature	±2%#					
Focus	User Adjustable					
Isolated Body	Yes					
Input leads	2 Leads, / Red (+Ve) /Black (0 V)/Yellow (Optional TTL - Red & IR Model Only)					
Lead Length (mm)	215					
Optional TTL Modulation - Bandwidth (Khz)	100 (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			<0.2		
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						
	520nm 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 LDM126G/635/1.						
All specifications are typical @ 25°C						

Laser Safety

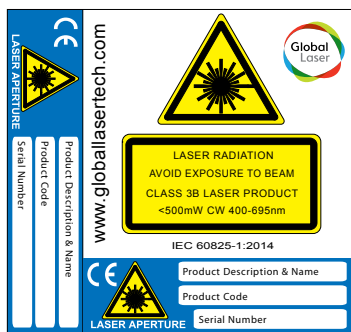
Our laser diode modules are compliant to IEC 60825-1: 2014 standards. The lasers fall within one of the following classifications depending on power and wavelength. The labels supplied with the units are shown below.



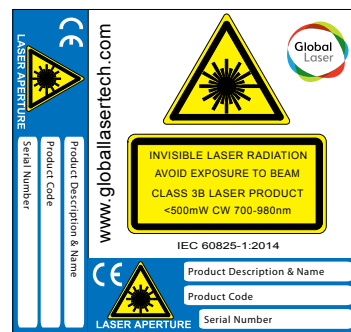
Class 2 Laser Label



Class 3R Laser Label



Class 3B Laser Label



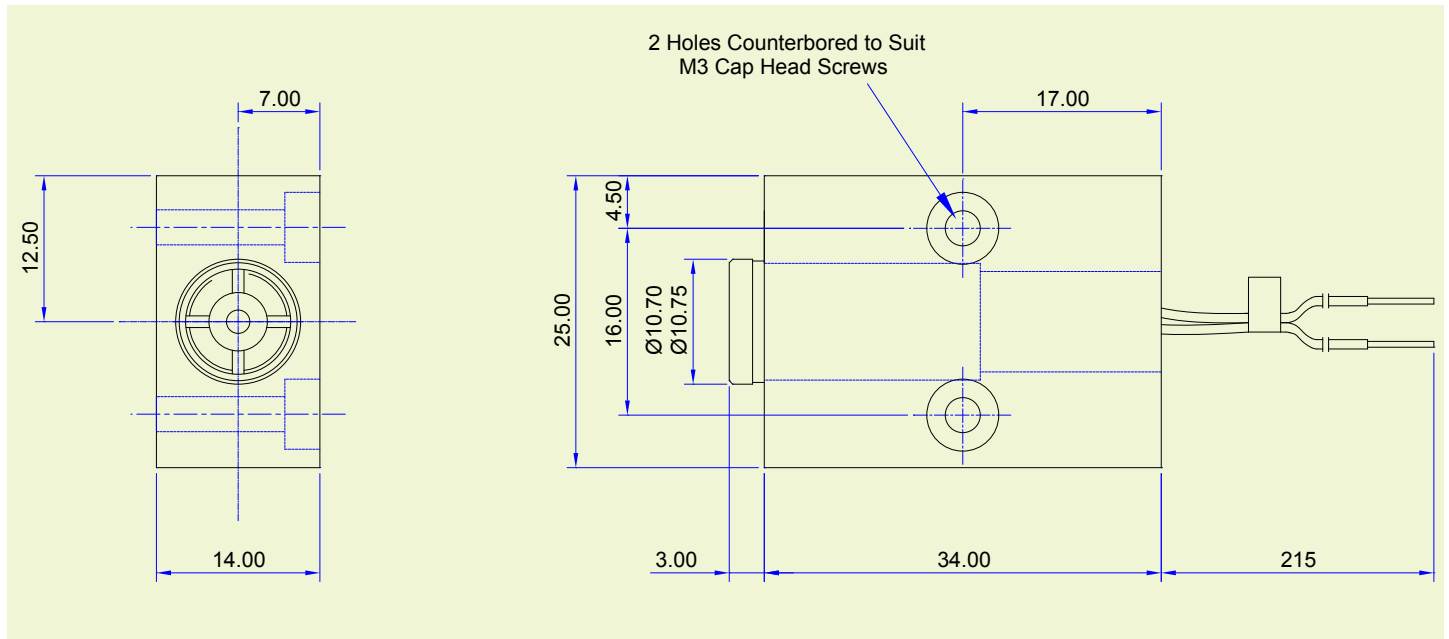
Class 3B IR Laser Label

Quality & Warranty

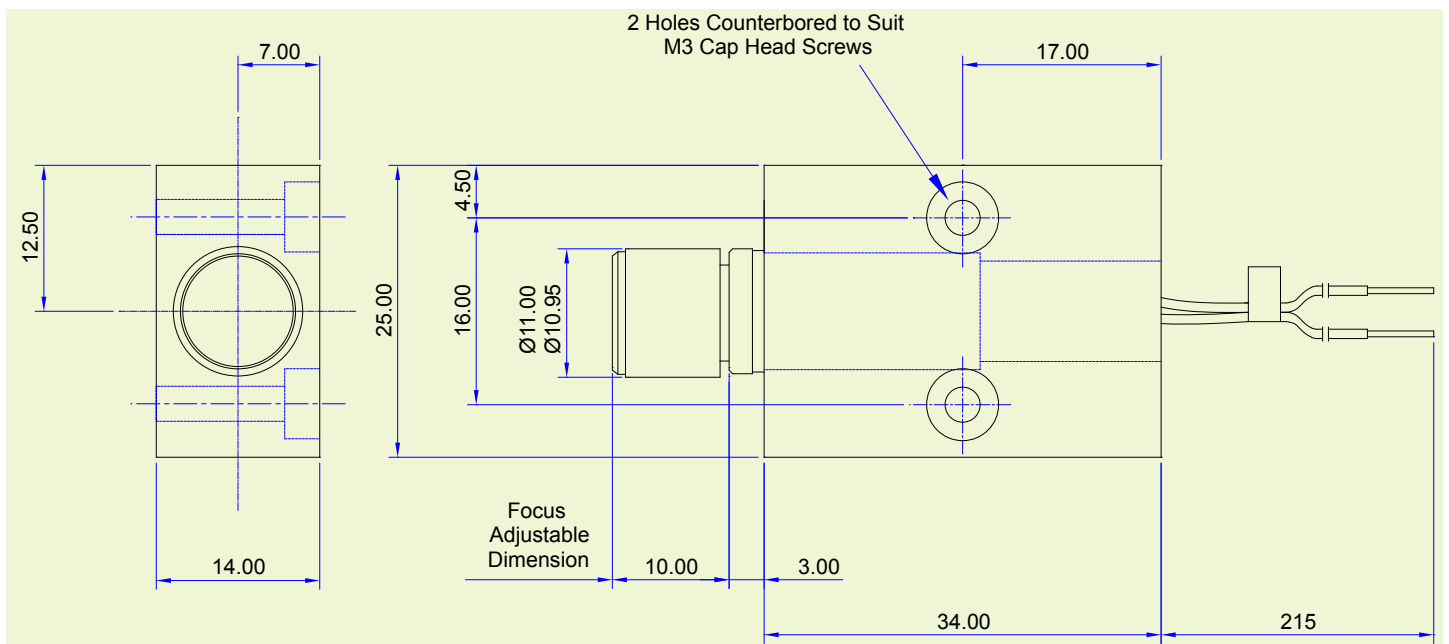
The LDM126 is supplied with a 12 month parts and labour warranty. Our manufacturing operations are certified to ISO9001.

Mechanical Drawings

LDM126 with G Lens Outline



LDM126 with P Lens Outline



Drawings not to scale

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



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