



# Diode Lasers SLM Series

Single Longitudinal Mode Laser Series - 632.8nm



## KEY PERFORMANCE FEATURES

- High Power Single Mode Performance
- VBG® Wavelength Stabilized
- Ultra Stable Output Power
- Fully Integrated OEM Solution
- Very Low Power Consumption
- Collimated or Fiber Coupled Output
- Compact Single Box Design

## APPLICATIONS

- HeNe Replacement
- Flow Cytometry
- Confocal Microscopy
- Metrology
- Interferometry
- Raman Excitation Source
- Microlithography

Center Wavelength ( $\pm 0.5\text{nm}$ )

632.8nm

Powered by:



# SPECIFICATIONS

Operating Specifications	Units	Value
Output Power Free Space*	mW	20 to 50
Output Power Fiber Coupled	mW	1 to 25
Spectral Linewidth (Typical)	KHz	<100
Wavelength Stability (Over 8 Hours)	pm	±2
ASE Suppression (Typical)	dB	40
Optical Power Stability (Over 8 Hours)**	% rms	±1
Noise (10Hz - 100MHz)	% rms	0.2

\*Factory set to user specified power output (See Ordering Information Table for options)

\*\*Ambient Temperature ±3° C

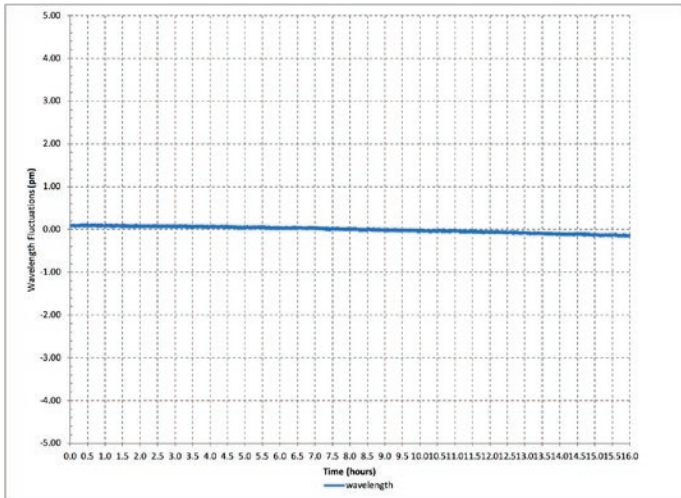
Free Space Optical Specifications	Units	Value
Beam Quality (m <sup>2</sup> Typical) - Vertical	–	1.2
Beam Quality (m <sup>2</sup> Typical) - Horizontal	–	1.1
Beam Diameter - Vertical	mm	1.6
Beam Diameter - Horizontal	mm	0.8
Beam Aspect Ratio	–	1.5 to 2
Beam Divergence - Vertical	mrad	0.8
Beam Divergence - Horizontal	mrad	1.3
Beam Pointing Stability (Over 8 Hours)	µrad	<50
Polarization Ratio	linear	100:1

Electrical Specifications	Units	Value
DC Input (Max)	–	2A @ 3.3V
Warm-up Time (Typical)	min	2
Power Consumption (Typical/Max)	W	5
Interface - USB & 10-Pin I/O Connectors		

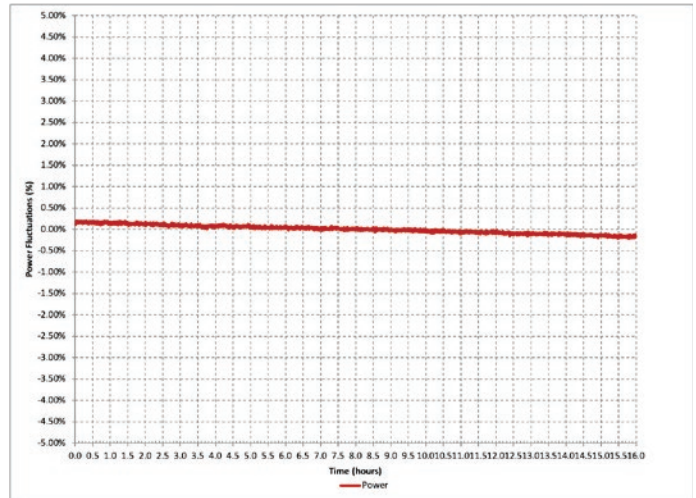
Environmental Specifications	Units	Value
Case Temperature*	°C	15 to 40
Humidity (Non-condensing)	%	5 to 95

\*Must be operated on a heat sink.

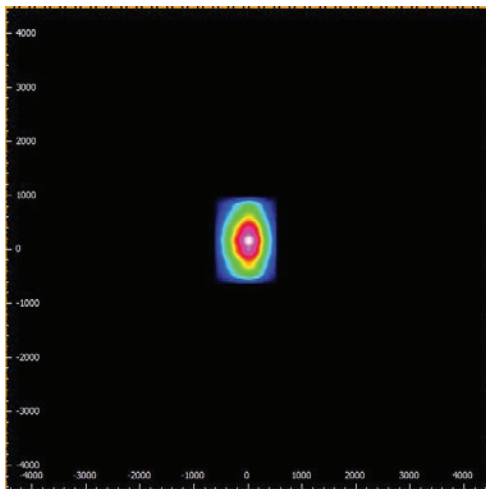
Wavelength Stability



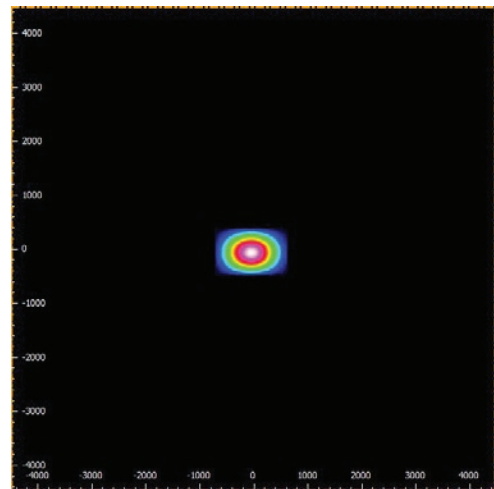
Power Stability



Free Space Beam  
Near Field

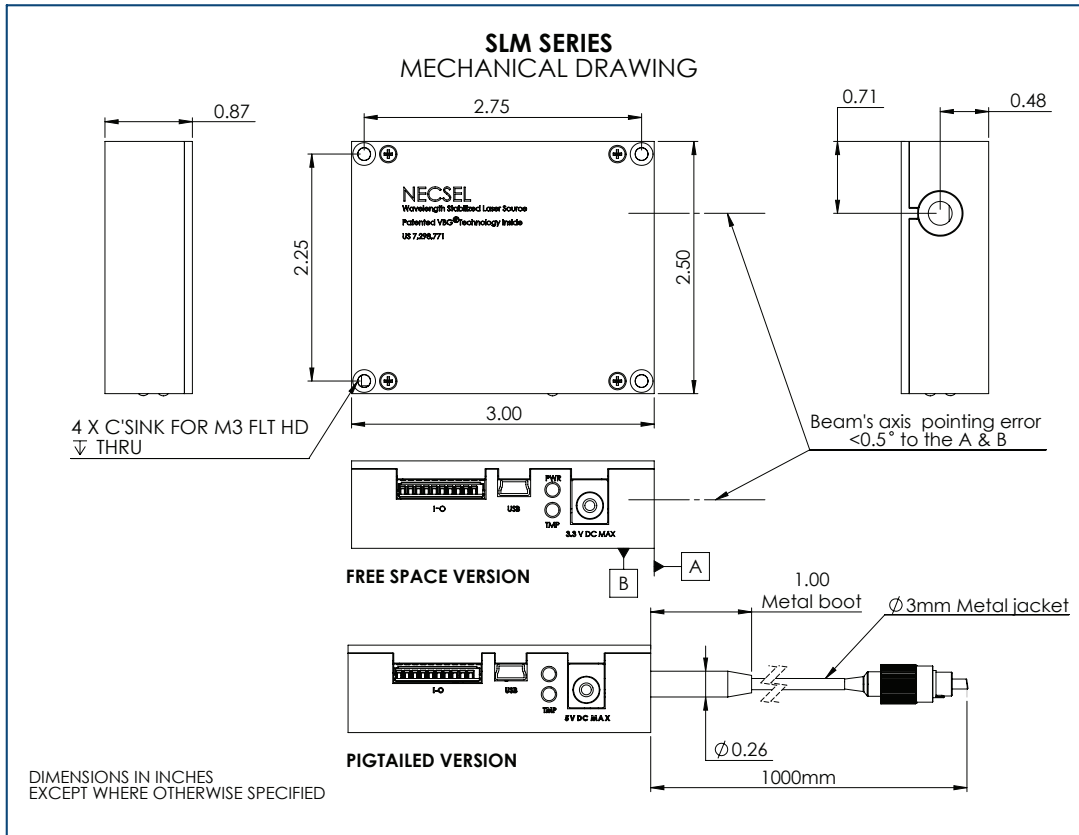


Free Space Beam  
Far Field



# SPECIFICATIONS & ORDERING INFORMATION

**Weight = 135 grams    Dimensions = 86 cm<sup>3</sup> (5.25 in<sup>3</sup>)**



Part Number Configuration			Output Power mW	Fiber Connector	
SLM-632.8-	SMF-	01	10mW	FC/APC	
		02	20mW	FC/APC	
		04	5mW	FC/APC	
		05	3mW	FC/APC	
		07	0.99mW	FC/APC	
		PMF-	01	20mW	FC/APC
			02	5mW	FC/APC
03	3mW		FC/APC		
05	1.2mW		FC/APC		
MMF-	01	40mW	FC/APC		
	FS-	01	50mW	N/A	
02		30mW	N/A		
03		25mW	N/A		
06		5mW	N/A		

**SMF** (Single Mode Fiber) is 4/125um NA=0.13 with 3mm OD stainless steel armor. **PMF** (Polarization Maintaining Fiber) is 4/125um PANDA style Fiber, NA=0.13 with 3mm OD stainless steel armor. **MMF** (Multi Mode Fiber) is 62.5/125um NA=0.22 with 3mm OD stainless steel armor. **FS** is collimated free space output. Contact NECSEL Sales for other product versions.

