

**USHIO** *Applying Light to Life*



## Diode Lasers PLM Series

COMPACT POWER STABILIZED  
SINGLE-MODE SERIES—Blue & Green Wavelengths



### KEY PERFORMANCE FEATURES

- Ultra Stable Output Power
- Compact Single Box Design
- Low Power Consumption
- Several Wavelengths Available
- Free-space or Fibered Outputs

### APPLICATIONS

- Raman Excitation Source
- Flow Cytometry
- Semiconductor Processing
- Real-time Process Control
- Metrology

Center Wavelength ( $\pm 0.5\text{nm}$ )	405nm	488nm	520nm
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\*NOTE: Additional wavelengths available upon request

## SPECIFICATIONS

Operating Specifications	Units	405nm	488nm	520nm
Free-Space Output Power	mW	150	50	100
Fibered Output Power*	mW	–	–	15
Spectral Linewidth (Typical)	nm	1 to 2		
Wavelength Stability (Over 8 Hours)	nm	±1		
Optical Power Stability (Over 8 Hours)**	% pk-pk	<2		
Noise (10Hz - 100MHz)	% rms	0.2		
Adjustable Output Power	%	10 to 90		

\*See ordering information for options. Power value given for SMF version.

\*\*APC mode

Free Space Optical Specifications	Units	405nm	488nm	520nm
Beam Quality (m <sup>2</sup> Typical) - Vertical	–	1.2		
Beam Quality (m <sup>2</sup> Typical) - Horizontal	–	1.1		
Beam Size - Vertical	mm	1.2	1.8	1.8
Beam Size - Horizontal	mm	0.6	0.6	0.6
Beam Aspect Ratio	–	2	3	3
Beam Divergence - Vertical	mrad	0.8		
Beam Divergence - Horizontal	mrad	1.3		
Beam Pointing Stability (Over 8 Hours)	µrad	<50		
Beam Pointing Accuracy	deg	1		
Polarization Ratio	linear	100:1		

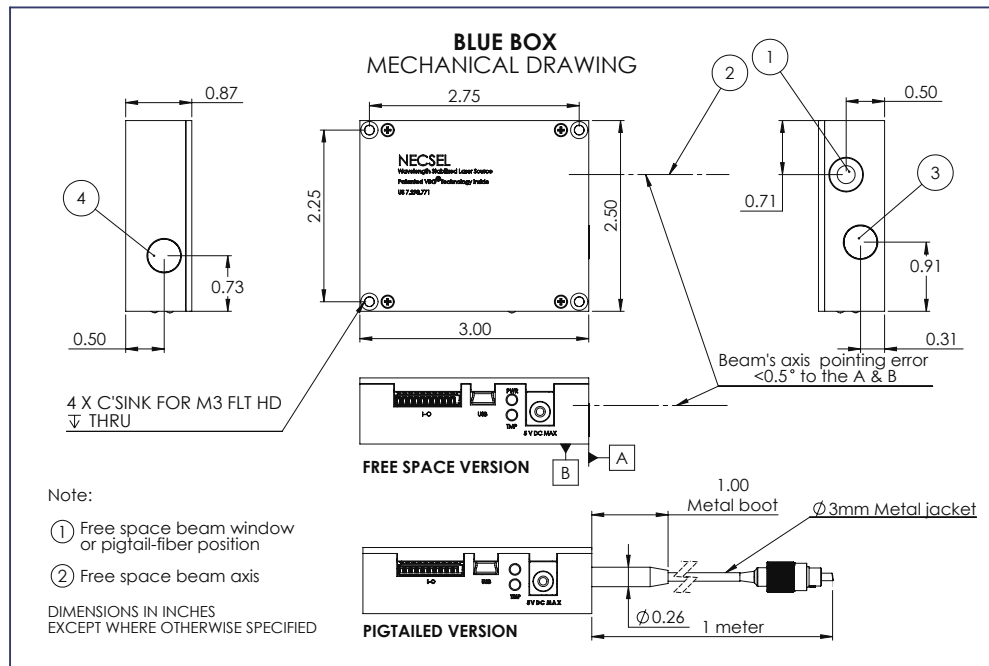
Electrical Specifications	Units	Value
DC Input 1	–	0.5A @ 9V
DC Input 2	–	2A @ 3.3V
Warm-up Time (Typical)	sec	10
Power Consumption (Typical/Max)	W	<12
Interface - USB & 10-Pin I/O Connectors		

Environmental Specifications	Units	Value
Operating Case Temperature*	°C	-10 to 50
Humidity (Non-condensing)	%	5 to 95

\*Must be operated on a heat sink.

SPECIFICATIONS & PHOTOMETRICS

**Weight = 134 grams    Dimensions = 86 cm<sup>3</sup> (5.2 in<sup>3</sup>)**



## ORDERING INFORMATION

Part Number	Fiber Type	Wavelengths Available
PLM-XXX-SMF	3.5µm MFD (Mode Field Diameter)	520 nm
PLM-XXX-PMF	3.5µm MFD PANDA	520 nm
PLM-XXX-MMF	50, 62.5 & 105µm MMF (Multi Mode Fiber)	All
PLM-XXX-FS	(Free-space)	All

*Part Number System: PLM - XXX - XXX*


  
*Specific Wavelength*     *Fiber Type or Free-space*



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