

**USHIO** *Applying Light to Life*

## Diode Lasers SLM Series

Single Longitudinal Mode Laser Series - 785nm



### 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

- Raman Spectroscopy
- Flow Cytometry
- Confocal Microscopy
- Metrology
- Interferometry
- Fluorescence Excitation
- Microlithography

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

**785nm**

## SPECIFICATIONS

Operating Specifications	Units	Value
Output Power Free Space*	mW	10 to 80
Output Power Fiber Coupled	mW	1 to 40
SLMD Variable Drive Current Firmware Linewidth	MHz	<1.0
SLM Fixed Power Firmware Linewidth	kHz	<1.0
Wavelength Stability (Over 8 Hours)	pm	±30
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

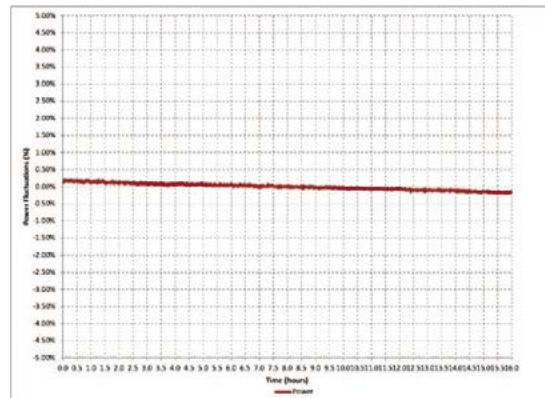
Electrical Specifications	Units	Value
DC Input (Max)	–	2A @ 3.3V
Warm-up Time (Typical)	min	2
Power Consumption (Typical/Max)	W	5
Interface - USB & 10-Pin I/O Connectors		

Environmental Specifications	Units	Value
Operating Case Temperature*	°C	10 to 40
Humidity (Non-condensing)	%	5 to 95

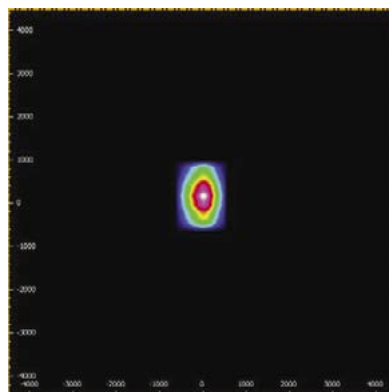
\*Must be operated on a heat sink.

## SPECIFICATIONS & PHOTOMETRICS

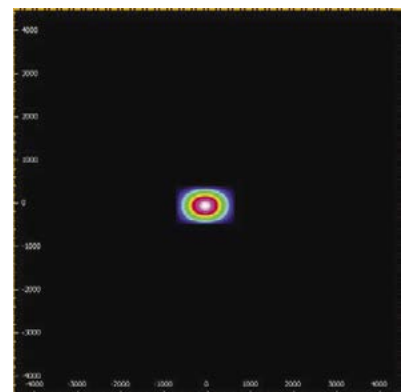
### Power Stability



### Free Space Beam Near Field

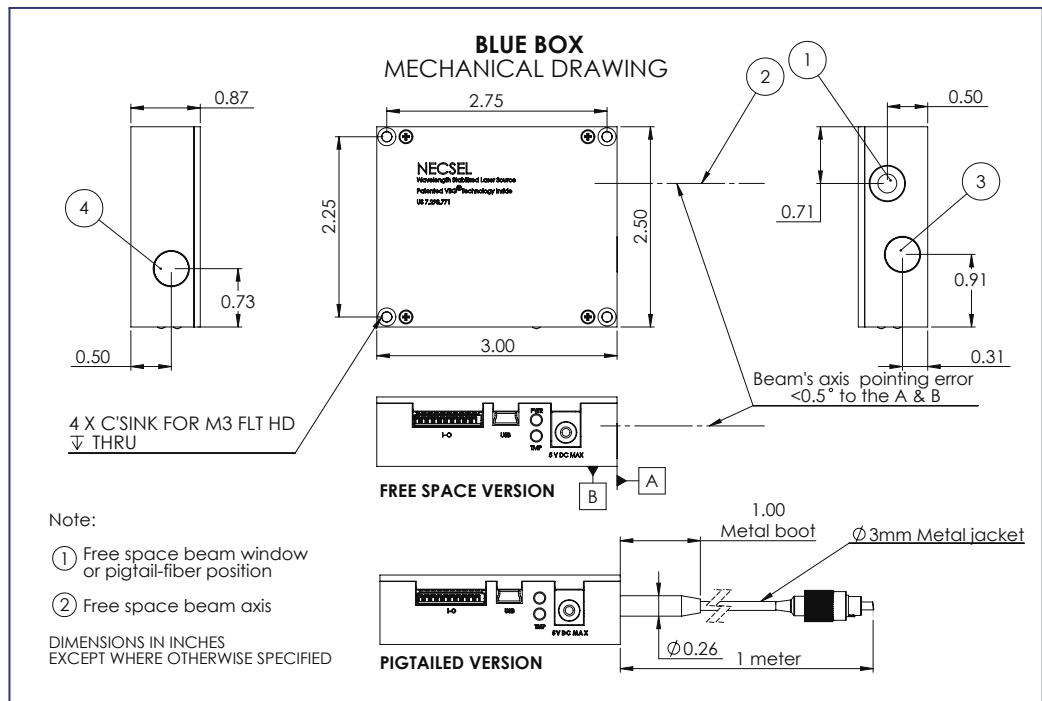


### Free Space Beam Far Field



SPECIFICATIONS & ORDERING INFORMATION

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



Part Number	Firmware	Linewidth	Output	Power mW
SLM-785.0-FS	Fixed Power	<1kHz	Free Space	50mW
SLMD-785.0-FS	Adjustable Drive Current	< 1MHz	Free Space	>50mW
SLM-785.0-SMF	Fixed Power	<1kHz	SMF	20mW
SLMD-785.0-SMF	Adjustable Drive Current	< 1MHz	SMF	>20mW
SLM-785.0-PMF	Fixed Power	<1kHz	PMF	20mW
SLMD-785.0-PMF	Adjustable Drive Current	< 1MHz	PMF	>20mW

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Refer to website for product availability, compliance, and regulations. Specifications may be subject to change without prior notice.

Form No. S-SLM-785nm/0222