

405nm Narrow-Linewidth Laser Module

Description:

Ondax's 405nm SureLock™ (ECL) Extended Cavity Laser Module has an integrated TEC and driver circuit in a compact, self contained, rugged package. The mounting hole pattern is compatible to pre-existing laser companies. A built-in temperature controller maintains the laser diode temperature within $\pm 0.01^{\circ}\text{C}$ resulting in excellent power stability that varies less than 1% over long term.

The wavelength stabilization with the Ondax Volume Holographic Grating (VHG) PowerLocker® technology guarantees long term wavelength stability.

Features:

- Wavelength stability ($<0.001\text{nm/hr}$)
- Narrow linewidth ($<40\text{pm}$)
- Wavelength locked to $<\pm 1\text{nm}$
- Coherence length ($>4\text{mm}$)
- Custom wavelengths available
- Custom accessories available

Applications:

Raman Spectroscopy, Data Storage, Flow Cytometry, Metrology/Interferometry, Embossed Holograms, CD Mastering, Diffraction Grating Fabrication, Confocal Microscopy, Particle Counting, Fluorescence, Nondestructive testing and Microlithography..

Single Mode Narrow Linewidth:
 $<80\text{GHz}$, $<40\text{pm}$

Wavelength Stability:
 $<\pm 0.001\text{nm/hr}$

Narrow Bandwidth



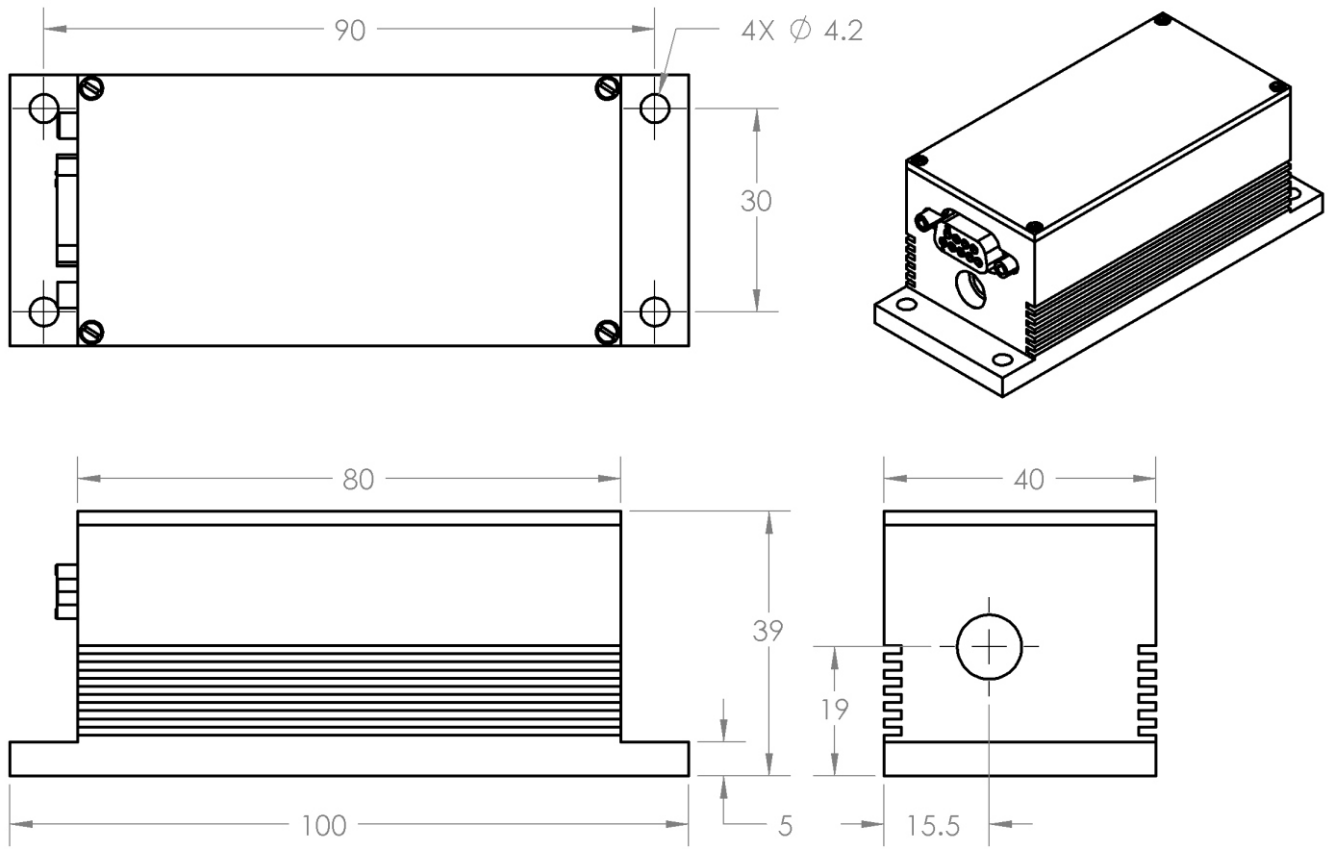
Specifications:

Optical	Min	Typ	Max	Unit
Lasing Wavelengths		403		nm
		405		nm
		407		nm
		409		nm
Wavelength Stability (over 12hrs)			$\pm 5\text{pm}$	pm
Center Wavelength Tolerance	-1		1	nm
Output Power (cw)		50		mW
Polarization Ratio		100:01:00		
Polarization		Horizontal		
Linewidth		80 (40)		GHz (pm)
Coherence Length		4		m
Noise (RMS) (10Hz-20MHz)		0.5		%
Power Stability (24hrs)		1		%
Spatial Mode	Single Mode			
Longitudinal Mode Structure	Multiple-longitudinal Mode (MLM)			
Side Mode Suppression Ratio	$>20\text{dB}$			
Coherence Length		4		m
Beam Size: ($2W_0$)		2.5		mm
Beam Divergence		0.6		mrad
Electrical				
Operating Voltage		100-240		VDC
Power Consumption		10		W
Electrical Connections	9V DC, 3.3V DC			
Mechanical				
Storage Temperature	-10		60	deg. C
Operation Temperature	15		45	deg. C
Operation Humidity	$<90\%$ Non-Condensing			
Dimensions (W x H x L)	40 x 39 x 90mm			
Warranty	5,000 or 1 year			

Specifications are subject to change without notice. Each purchased laser is provided with test data. Please refer to this data before using the laser.

115-810XX-XXX

PACKAGE:
Dimensions in mm



Model Numbers:

ECL - X X X - PLR - X X

↑
Wavelength:
e.g 405

↑
Power:
e.g XX



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