

RO Series Collimated Single Frequency Laser Modules



Single Frequency (<50MHz Typical)
Collimated Output Beam

Features:

- Single frequency performance
- Precision cooling and current control
- Wavelength stability 0.015nm/°C
- Noise <0.3% RMS
- Compact, cylindrical package
- Collimated output beam
- Power supply
- Custom wavelengths available

Applications:

- HeNe Replacement
- Raman Spectroscopy
- Metrology
- Bio-instrumentation
- Graphic Arts
- Sensing
- Analytical Instrumentation

Ondax's RO Series Single Frequency Collimated Laser Module integrates our SureLock™ wavelength-stabilized lasers with active TEC cooling and precision current control circuitry into a compact, cylindrical package. Designed for easy mounting and integration, this rugged self-contained module is ideal for incorporation into precision instrumentation or for laboratory applications. The 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 the long term.

The RO Module is available in wavelengths from 636nm to 808nm to suit any application.

Specifications:

Parameter	Symbol/Unit								
Center Wavelength ¹	L_p /nm	640	658	685	691	780.25	785	808	
Center Wavelength Tolerance	L_p /nm	± 1	± 1	± 1	± 1	± 0.2	± 1	± 1	
Output Power	P_o /mW	7	30	40	40	75	75	150	
Beam Size	mm	0.5 x 2.0	0.7 x 1.1	0.9 x 1.4	0.9 x 1.5	0.8 x 1.4	0.9 x 1.7	0.9 x 1.7	
Linewidth, maximum (MHz)	$\Delta\lambda$	50	50	50	50	50	50	50	

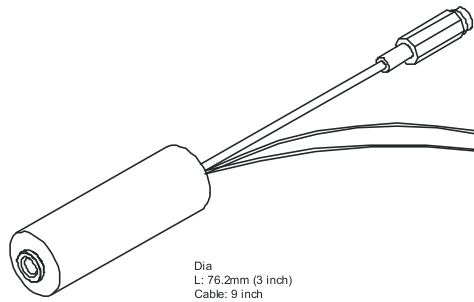
¹Available in increments of 2 nm. ²For 405nm diode only. Please specify wavelength at time of ordering.

Operating Specifications

Optical	Min	Typ	Max	Unit
Spatial Mode	Single Mode			
Polarization	100:1			
Beam Divergence	1		10	mrad
Pointing Stability			± 25	μrad
Noise (RMS, 0-20 MHz)	0.25		0.5	%
Power Stability (1 hr)	0.10		0.5	%
Electrical	Min	Typ	Max	Unit
Operating Current			0.5	A
Operating Voltage	3.3			VDC
Modulation Input (TTL)	0			VDC
Modulation Speed			3	kHz
Environmental	Min	Typ	Max	Unit
Storage Temperature ³	0			°C
Operating Temperature ³	10	25	40	°C
Operation Humidity	Non-condensing			
Dimensions (D x L)			25.4 x 76.2	mm

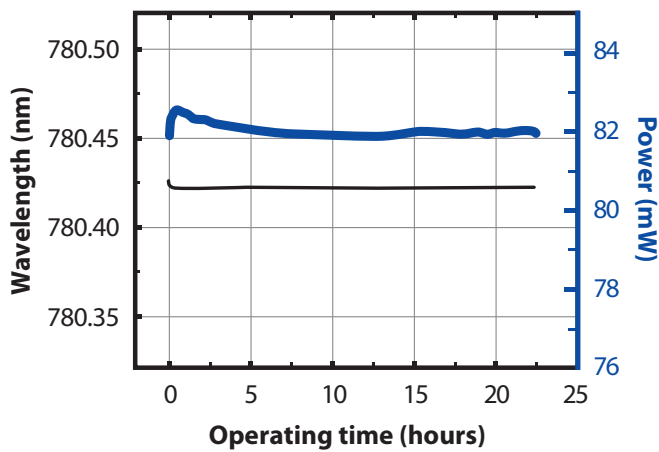
RO Series Collimated Single Frequency Laser Modules

Laser

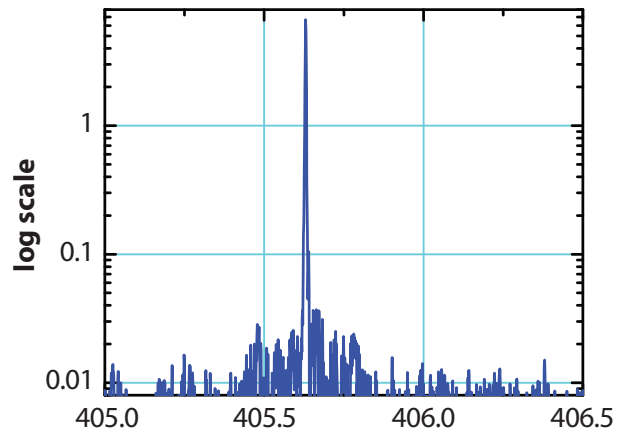


Dia: 76.2mm (3 inch)
L: 76.2mm (3 inch)
Cable: 9 inch

Typical Wavelength and Power Stability



Optical Spectrum



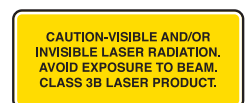
Model Numbers

RO-~~XXX~~-PLR-XX

↑ ↑
Power (mW)
Wavelength (nm)

Electrical Connections

Power (+ Red, - Black), TTL (White), GND (Black)



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 626-357-9600 (Tel)
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For more information about Ondax products and the name of a local representative or distributor, visit www.ondax.com, email sales@ondax.com, or call (626) 357-9600. Specifications subject to change without notice. Each purchased laser is provided with test data and manual. Please refer to this data before using the laser.