

# Single Frequency Collimated Laser Module

## Description:

The Ondax series of Single Frequency Collimated Laser Modules feature wavelengths from 405nm to 808nm with an integrated TEC and driver circuit in a compact, self-contained, and rugged package. 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 long term.

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

## Features:

- Single frequency
- Compact, rugged package
- Blue, red, and infrared wavelengths
- Custom wavelengths available

## Applications:

Raman spectroscopy, flow cytometry, metrology, Bio Instrumentation, graphic arts, analytical instrumentation, sensing, and data storage.



## Specifications:

### Operating Specifications

	405	638	658	685	785	808	Units
Lasing Wavelengths	405-408, in 1nm increments	636-640 in 2nm increments	656-660, in 2nm increments	683-685, in 2nm increments	780-787, in 2nm increments	808	nm
Typical Power	12, 40	8	30	40	75, 110	150	mW

Optical	Min	Typ	Max	Unit
Polarization Ratio		100:01:00		
Linewidth		30, 160 <sup>(1)</sup>	50	MHz
Noise (RMS) (0 ~ 20MHz)		0.25	0.5	%
Power Stability (1 hr)		0.1	0.5	%
Power Stability (24 hrs)		0.3, 1 <sup>(1)</sup>	1, 2 <sup>(1)</sup>	%
Spatial Mode	Single Mode			
Beam Size: (2W <sub>0</sub> )				
	405nm	0.8 x 0.4		mm
	638nm	0.5 x 2		mm
	658nm	0.7 x 1.1		mm
	685nm	0.9 x 1.4		mm
	785nm	0.9 x 1.7		mm
	808nm	0.9 x 1.7		mm
Beam Divergence		1	2	mrad
Pointing Stability			+/- 25	rad
<b>Electrical</b>				
Operating Voltage		3.5, 7 <sup>(1)</sup>		VDC
Operating Current			0.5	A
Modulation Input (TTL)	0		5	VDC
Modulation Speed			3	KHz
Electrical Connections	Power (+ Red, - Black), TTL (White) GND (Black)			
<b>Mechanical</b>				
Storage Temperature	0		40	deg. C
Operation Temperature	10		40	deg. C
Operation Humidity	Non-Condensing			
Dimensions (D x L)	25.4 x 76.2 mm (1" x 3")			

(1) Applicable to 405nm module

Specifications are subject to change without notice. Each purchased laser is provided with test data.

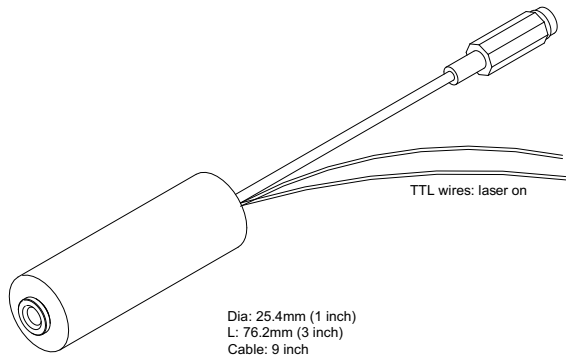
Please refer to this data before using the laser.

115-81029-XXX Rev. 6

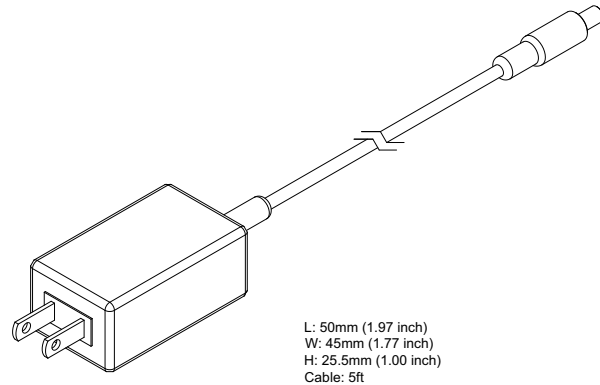
PACKAGE:

## Laser

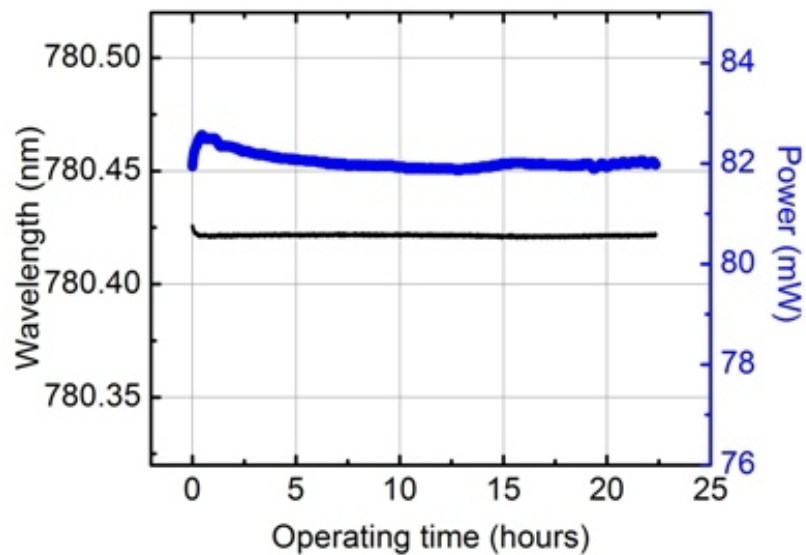
Default: Laser on: (TTL wire - no connection)  
To turn laser off: Connect TTL (white) wire to ground (black) wire



## Power Supply



Typical Wavelength and Power Stability



### Model Numbers:

RO - X X X - PLR - X X - 1

↑  
Wavelength:  
e.g 785

↑  
Power:  
e.g 80

↑  
With TTL Modulation



**LASER RADIATION**  
AVOID EXPOSURE TO THE BEAM  
CLASS 3B LASER PRODUCT

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