NLMO Series Multi-mode Narrow Linewidth Laser

The NL series narrow linewidth diode lasers are RealLight's self-developed wavelength-stabilized lasers, deliver high output power and excellent stability at 532nm, 638nm, 784nm, 785nm, 808nm, 830nm, 981nm or 1064nm output wavelengths, with power ranging from 100mW to 800mW.

Key Features

- Excellent wavelength stability ±7pm@4h
- Power stability < ±2%
- Low power consumption, typical < 5W
- Compact design, easily integrated

Applications

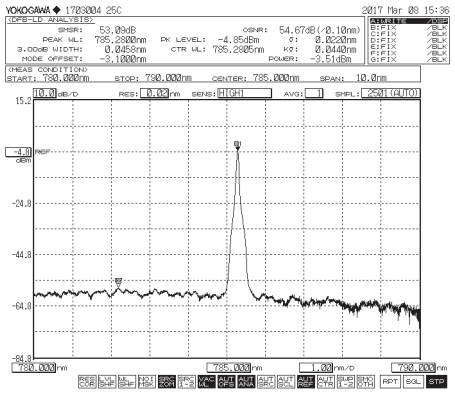
Raman spectroscopy

Laser-induced fluorescence

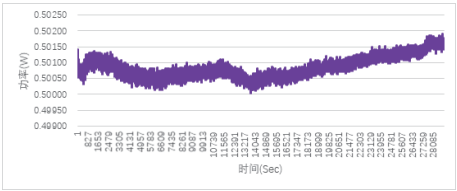
Technical Specifications

Optical Parameters							
Center Wavelength (nm)	532*	638	785	808	830	981	1064
Output Power (mW)	100	500	500	600	500	800	800
Wavelength Tolerance (nm)	±0.5						
Linewidth (nm)	<0.1	<0.1	<0.1	<0.3	<0.1	<0.3	<0.1
Wavelength Stability (typ., @4h)	±5 pm	±7 pm					
Power Stability (typ., @4h)	<3%(RMS)	±2%(P-P)					
SMSR	-	>35	>40				
System Parameters							
Adjustbility % Full Power	0~100%						
Warm up Time (min)	15						
Control Interface	PH2.0~10P , USB						
Connector	FC/PC, SMA905						
Output Fiber	105 μm, 0.22 NA						
Supply Voltage	5VDC/2A						
Power Consumption (typ., W)	<5						
Storage Humidity	0~80% RH						
Storage Temperature (℃)	-25~55						
Operating Temperature (℃)	10~35 (heat sink is required)						
Weight (g)	<150						
Dimensions (mm)	76.2×63.5×22						

1. *532nm is diode pumped solid-state laser.
2. Higher power options available upon request.
3. All the data in the above table are the typical values obtained from the tests at room temperature of 25℃, and the final data is subject to the final test report.



785nm laser spectrum（SMSR＞40dB）

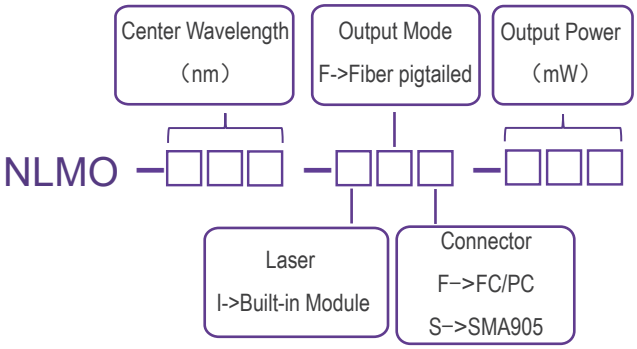


785nm power stability@4h

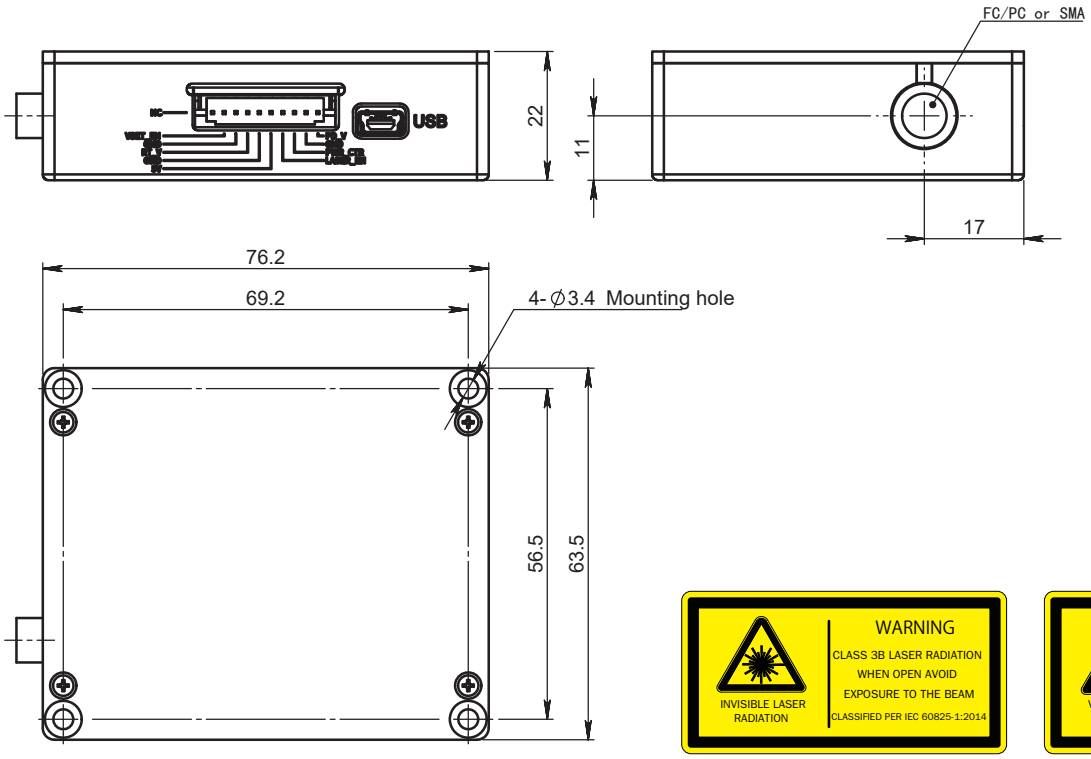
Ordering Information

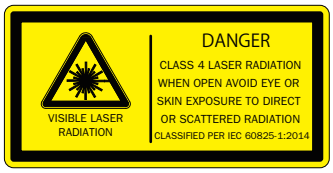
Wavelength (nm)	Output Power (mW)	Part Number	Connector
532	100	NLMO-532-IF(F)-100	FC/PC
	100	NLMO-532-IF(S)-100	SMA905
638	500	NLMO-638-IF(F)-500	FC/PC
	500	NLMO-638-IF(S)-500	SMA905
785	500	NLMO-785-IF(F)-500	FC/PC
	500	NLMO-785-IF(S)-500	SMA905
808	600	NLMO-808-IF(F)-600	FC/PC
	600	NLMO-808-IF(S)-600	SMA905
830	500	NLMO-830-IF(F)-500	FC/PC
	500	NLMO-830-IF(S)-500	SMA905
981	800	NLMO-981-IF(F)-800	FC/PC
	800	NLMO-981-IF(S)-800	SMA905
1064	800	NLMO-1064-IF(F)-800	FC/PC
	800	NLMO-1064-IF(S)-800	SMA905

Part Numbering Schema



Mechnical Drawings (mm)





Pin Descriptions		
PIN	**Function**	**Description**
1	NC	NC
2	VSET_ENABLE	Set to low-level to control power through PIN8, high level or left floating: the laser outputs at rated power
3	GND	Signal Ground
4	RTV	Rt signal level, 1.5V for 25℃
5	GND	Input Power Ground
6	+5V	5VDC/2A
7	LASER ENABLE	Set to high-level to enable the laser, low-level or suspend to disable LD
8	Power Control	Apply 0-1.2V to control output power (0-100% full power adjustability)
9	GND	Signal Ground
10	PDV	PD feedback signal