

orange one – Single-Frequency CW Fiber Laser



The orange one combines a unique ultra-narrow linewidth with high output power to provide a single-frequency, turnkey, fiber laser system. This compact laser package is ideal for applications requiring low noise and stable performance. The integrated seed laser is a single frequency fiber laser module from NKT Photonics. The near infrared output can be efficiently converted to the visible in a PPLN waveguide frequency doubler.

Applications

- Optical Metrology
- Interferometry
- High-Resolution Spectroscopy
- Atom Trapping
- LIDAR Sensing
- Optical Data Storage

Features

- Ultra-Narrow Linewidth
- Stable, Single-Frequency Operation
- High-Power Output
- Burst Noise-Free Operation
- Mode-Hop-Free Tuning
- Vibration-Free Analog Fine Tuning, Ready-to-Lock
- Digital Coarse Tuning
- Low Phase Noise and Low Intensity Noise
- Single Mode Fiber Output (FC/APC)
- Stand-Alone Unit in a 19" Rack System with Integrated Power Supply

Specifications

Linewidth (120 μ s)	<100 kHz
Wavelength Range*	1020 - 1121 nm
Center Wavelength Tolerance	± 0.1 nm
Temperature Tuning Range	>450 pm (-0.3/+0.15 nm), 26 pm $^{\circ}$ C ⁻¹
Piezo Tuning Range	>9 pm; 0.1 pm/V
Piezo Voltage	0 - 200 V
Output Power	1 W or 2 W (Model and Wavelength Dependent)
Output Port	PM, Non-PM (1 m Patch Cord Included)
ASE Level	<10%

Power and Environmental Requirements

Operating Voltage	110/115/230 VAC
Frequency	50 to 60 Hz
Power Consumption	200 W
Cooling Requirements	No Water Cooling Required
Laser Head Stabilization	Temperature Stabilized with Peltier Elements
Operating Temperature	22 \pm 5 $^{\circ}$ C
Dimensions	448 mm x 132 mm x 437 mm (17.6" x 5.2" x 17.2")
Weight	20 kg

*Specify center wavelength when ordering

ITEM #	\$	£	€	RMB	DESCRIPTION
orange one-1PM			CALL		>1 W (up to 2 W)* Single-Frequency Fiber Laser with PM Output
orange one-SHG			CALL		>200 mW Single-Frequency Fiber Laser with Frequency Doubler**
orange one-1			CALL		>1 W (up to 2 W)* Single-Frequency Fiber Laser
orange one-2			CALL		>2 W (up to 4 W)* Single-Frequency Fiber Laser

*Output power depends on user-selected wavelength

**Frequency doubler directly spliced to output of orange one-1PM

For local and updated pricing, please call Menlo Systems, Inc. in North America 973-300-4490, Menlo Systems GmbH in Europe +49-89-189-1660, or Thorlabs Japan, Inc. in Asia +81-3-5979-8889, or email sales@menlosystems.com.