orange

Femtosecond Fiber Laser 1040 nm & 520 nm

MenloSystems

Menlo Systems' femtosecond Yb fiber-baser laser sources now offer more than 10 W in average power with a pulse duration of <200 fs. Based on our unique figure 9® design, the lasers offer reproducible and long-term stable operation. Both oscillator and amplifier use polarization maintaining (PM) fiber components only, ensuring excellent stability and low-noise operation. The second harmonic generation is a highly efficient module for maximum performance. The laser is maintenance free, user installed and ready to use at the press of a single button. Customize your laser with the available options to match the requirements of your application.

KEY SPECIFICATIONS

- Wavelength 1040 nm & 520 nm
- Output Power >10 W
- Pulse Length <150 fs
- Repetition Rate 50-250 MHz

APPLICATIONS

- OPA/OPO pumping
- Amplifier Seeding
- Ultrafast Spectroscopy
- Cell Surgery
- Multi-Photon Excitation
- 2-Photon Polymerization and 3D Printing

FEATURES

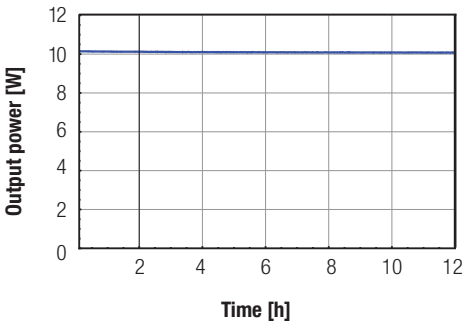
- High Stability and High Beam Quality
- Low Amplitude and Phase Noise
- All-PM Solution
- figure 9® Technology
- Laser Output in less than 60 Seconds after Pressing On-Button

OPTIONS

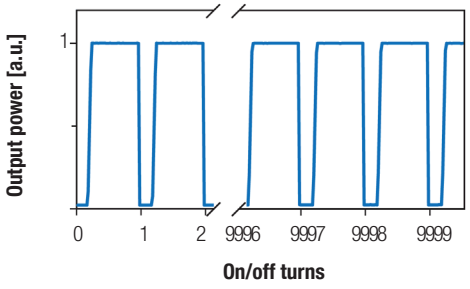
- **SHG 520**
  Frequency doubling to 520 nm
- **CHIRPED PULSES**
  Picosecond pulses for seeding applications
- **SYNC100**
  Repetition Rate Synchronization
  Tunable cavity length by high-bandwidth piezo-controlled synchronization
- **RRE-SYNCRO**
  Repetition Rate Stabilization
  Feedback electronics to phase lock pulses to an external clock (see separate data sheet for more details)
- **VARIO**
  User-Defined Repetition Rate
  Factory-set value selectable in the 50-250 MHz range
- **MULTIBRANCH**
  Additional Seed Ports
  Seeding of multiple amplifiers with optional subsequent frequency conversion to cover multiple wavelengths

PERFORMANCE DATA

Amplitude noise
< 1% rms (over 12h)



Reproducibility
Identical and consistent laser performance



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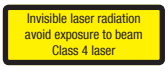
SPECIFICATIONS	ORANGE	ORANGE HIGH POWER	ORANGE HIGH POWER 10
Center Wavelength	1040 nm ± 10 nm	1040 nm ± 10 nm	1040 nm ± 10 nm
Average Power	>100 mW	>1 W	>10 W
Pulse Energy	>1 nJ	>10 nJ	>100 nJ
Pulse Width*	<150 fs	<150 fs	<200 fs
Repetition Rate**	100 MHz (50-250 MHz with VARIO)	100 MHz (50-250 MHz with VARIO)	100 MHz (50-250 MHz with VARIO)
Output Port	free space	free space	free space
Beam Quality	TEM00, M^2 <1.2 (typ.<1.1)	TEM00, M^2 <1.2 (typ.<1.1)	TEM00, M^2 <1.2 (typ.<1.1)
Auxiliary Output Port	optional	optional	optional
Additional Fiber-Coupled Seed Port	1 (up to 4 with MULTIBRANCH)	1 (up to 4 with MULTIBRANCH)	1 (up to 4 with MULTIBRANCH)
Polarization	linear, p-polarized	linear, p-polarized	linear, p-polarized
Beam Height	95 mm	95 mm	95 mm
SECOND HARMONIC MODULE SHG 520			
Key Specifications	>400 mW @ 520 nm, <150 fs		
Dual Output	520 nm & 1040 nm, linear, p-polarized		

*Chirped pulse option available. Please ask about your specific combination of output port configurations
**Please inquire for your specific combinations of average power, pulse duration and repetition rate.

REQUIREMENTS			
Operating Voltage	100/115/230 VAC		
Frequency	50 to 60 Hz		
Cooling Requirements	no water cooling is required		
Laser Head Stabilization	actively temperature stabilized		
Operating Temperature	22 °C ± 5 °C		
Laser Head Dimensions	400 x 415 x 140 mm^3	400 x 415 x 140 mm^3	580 x 500 x 140 mm^3
Laser Head Weight	23 kg	23 kg	36 kg
Control Unit Dimensions	449 x 435 x 132 mm^3	449 x 435 x 132 mm^3	449 x 435 x 132 mm^3
Control Unit Weight	11 kg	11 kg	17 kg
Warm-Up Time	<60 s		

ORDERING INFORMATION			
Product Code	orange	orange HP orange HP-520	orange HP 10

Please call for pricing. Specifications are subject to change without notice. Custom modifications are available, please inquire.



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