

C-Fiber 780

Femtosecond Fiber Laser 780 nm

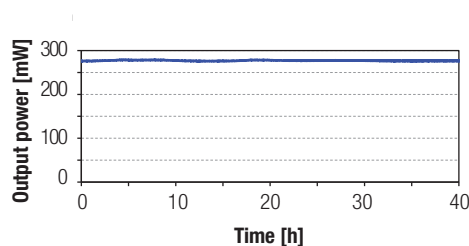


Menlo Systems' fiber-based femtosecond laser sources integrate the latest achievements in fiber technology into easy-to-use products. Menlo Systems' unique figure 9[®] design results in reproducible and long-term stable operation. It is based on the well-established nonlinear optical loop mirror (NOLM) mode locking mechanism. Both oscillator and amplifier use polarization maintaining (PM) fiber components only, ensuring excellent stability and low-noise operation. The subsequent second harmonic generation for the 780 nm 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.

PERFORMANCE DATA

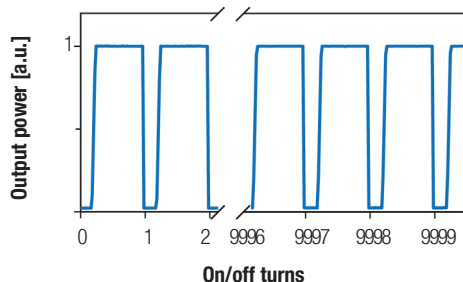
Amplitude noise

< 0.5% rms (over 24h)



Reproducibility

Identical and consistent laser performance



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KEY SPECIFICATIONS

- Wavelength 780 nm
- Output Power >250 mW
- Pulse Length <70 fs
- Auxiliary Output at 1560 nm
- Repetition Rate 50-250 MHz

APPLICATIONS

- Amplifier Seeding
- THz Generation & THz Physics
- Ultrafast Spectroscopy
- Multi-Photon Excitation
- 2-Photon Polymerization and 3D Printing

FEATURES

- High Stability
- Low Amplitude and Phase Noise
- All-PM Solution
- Single Mode-Lock State
- Menlo figure 9[®] Technology
- Dual color output (780nm/1560nm)

OPTIONS

- **SYNC100**
Repetition Rate Synchronization
Tunable cavity length by high-bandwidth piezo-controlled synchronization
- **RRE-SYNCR0**
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
- **FEMTOSCALE**
Additional Compression Unit
Compression of second harmonic output pulse length to <70 fs

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Femtosecond Fiber Laser 780 nm

SPECIFICATIONS	C-FIBER 780	C-FIBER 780 HIGH POWER
Center Wavelength	780 nm ± 10 nm	780 nm ± 10 nm
Average Power	>100 mW	>250 mW
Pulse Energy	>1.0 nJ	>2.5 nJ
Pulse Width	<100 fs (<70 fs with FEMTOSCALE)*	
Repetition Rate	100 MHz (50-250 MHz with VARIO)**	
Repetition Rate Instability	<1 ppm over 20 hours at constant temperature	
Timing Jitter	<2 fs [rms, 10 kHz.. 10 MHz]	
Output Port	free space	
Auxiliary Output Port***	free space, 1560 nm, >250 mW	free space, 1560 nm, >500 mW
Additional Fiber-Coupled Seed Port	1 (up to 4 with MULTIBRANCH)	
Polarization	linear, s-polarized	
Beam Height	75 mm	

*Compressor unit integrated in laser head module. **Please inquire for your specific combinations of average power, pulse duration and repetition rate. *** User can switch between 780 nm and 1560 nm port (arbitrary splitting ratios possible).

REQUIREMENTS	C-FIBER 780	C-FIBER 780 HIGH POWER
Operating Voltage	100/115/230 VAC	
Frequency	50 to 60 Hz	
Power Consumption	120 VA	
Cooling Requirements	no water cooling is required	
Laser Head Stabilization	actively temperature stabilized	
Operating Temperature	15 °C - 35 °C	
Laser Head Dimensions/Weight	415 x 350 x 110 mm ³ / 18 kg	415 x 350 x 140 mm ³ / 20 kg
Control Unit Dimensions/Weight	448 x 132 x 437 mm ³ / 10 kg	448 x 132 x 437 mm ³ / 12 kg
Warm-Up Time	<60 s	

ORDERING INFORMATION

Product Code	C-Fiber 780	C-Fiber 780 HIGH POWER
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Please call for pricing. Specifications are subject to change without notice. Custom modifications are available, please inquire.

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Invisible laser radiation
avoid exposure to beam
Class 3B laser

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