

1 μm Femtosecond Fiber Laser Bench Top



Applications

- Biomedical instrumentation
- Optical high speed sampling
- Terahertz radiation
- Optical switching
- Materials characterization
- Optical metrology

Features

- Wavelength tunable from 1030 to 1065 nm
- Pulse width selectable from 0.4 to 10 ps
- Pulse width tunability
- Near transform-limited output
- Linearly polarized output
- Minimal pulse pedestal
- Long term reliability
- RF synchronization output
- Turnkey operation

The 1 μm bench top femtosecond fiber laser (FPL) series is a passively mode-locked fiber laser that utilizes a saturable absorber to deliver excellent stability and reliability with turnkey operation. Along with a portable design, this Mendocino laser offers user-friendly front panel control knobs for flexible adjustment of wavelength, pulse width, and output power. Both tunable (from 1030 to 1065 nm) and fixed wavelength versions are available. The pulse width is factory selectable from 0.4 to 10 ps with near transform-limited pulse shape. The timing jitter is as low as 60 fs. The repetition rate can be specified from 10 to 50 MHz. With up to 20 mW output power, the FPL series is the most economical solution for applications requiring low power, such as seeding amplifier systems. An RF synchronization output is provided as a trigger signal.

FEMTOSECOND FIBER LASER

Technical Specifications

Model Number	FPL-01UFF	FPL-01UFT	FPL-02UFF	FPL-02UFT
Pulse Width (ps)*	0.4 ~ 10 (selectable)		0.8 ~ 10 (selectable)***	
Wavelength (nm)	1030 ~ 1065 (selectable)	1040 ~ 1065 (tunable)†	1030 ~ 1065 (selectable)	1040 ~ 1065 (tunable)†
Repetition Rate (MHz)**	40			
Average Output Power (mW)	0.5 (1 typical)	0.2 ~ 1 (wavelength dependent)	>10 (20 typical)	
Timing Jitter (fs)	60 (carrier offset 100 Hz ~ 1 MHz)			
Spectral Width (nm)	2 ~ 4		8 ~ 15	
Polarization Extinction Ratio (dB)	>20			
Operating Temp (°C)	10 ~ 35			
Operating Voltage (VAC)	85 ~ 264			
Dimension (cm)	34(w) x 42(d) x 9(h)			

* Once pulse width is selected, it is tunable by adjusting pump current. A Gaussian pulse shape (convolution factor of 0.7) is used to determine the pulse width for the second harmonic autocorrelation trace.

** Other repetition rates within 10 to 50 MHz are available; specifications may change at different repetition rates.

*** Compressible by end user to 0.2 ps for output pulses longer than 4 ps.

† 1030 ~ 1065 nm (typical tuning available).

Due to our continuous improvement program, specifications are subject to change without notice.

