

C-band Femtosecond Fiber Laser Bench Top



Applications

- Telecommunication components characterization
- Optical high speed sampling
- Terahertz radiation
- Optical switching
- Materials characterization
- Optical metrology

Features

- Wavelength tunable from 1535 to 1560 nm
- Pulse width selectable from 0.1 to 15 ps
- Pulse width tunability
- Near transform-limited output
- Minimal pulse pedestal
- Low timing jitter
- RF synchronization output
- Turnkey operation

The C-band bench top femtosecond fiber laser (FPL) 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, the FPL series offers user-friendly front panel control knobs for flexible adjustment of wavelength, pulse width, and output power. Both tunable (throughout the C-band) and fixed wavelength versions are available. The pulse width is factory selectable from 0.1 to 15 ps, with near transform-limited pulse shape and a better than 20 dB pedestal. The timing jitter is as low as 60 fs. The repetition rate can be specified from 10 to 100 MHz with either a polarization-maintaining (PM) or non-PM fiber output. 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.

Technical Specifications

Model Number	FPL-01CAF	FPL-02CAT	FPL-03CCF	FPL-03CCFPM
Pulse Width (ps)*	0.5	0.5	0.1	
Wavelength (nm)	1550	1535 ~ 1560 (tunable)	1550	
Repetition Rate (MHz)**	20			
Peak Output Power (W)	100	400	10K	5K
Average Power (mW)	>1	>4	20	10
Timing Jitter (fs)	60 (carrier offset 100 Hz ~ 1 MHz)			
Spectral Width (nm)	5.0		30 ~ 40	
Fiber Type	SMF-28***			Panda PM
Polarization Extinction Ratio (dB)	Not applicable			>20
Operating Temp (°C)	10 ~ 35			
Operating Voltage (VAC)	85 ~ 264			
Dimensions (cm)	34(w) x 40(d) x 9(h)			

* Up to 15 ps pulse width available; once selected it is tunable by adjusting pump current. A sech^2 pulse shape (convolution factor of 0.65) is used to determine the pulse width for the second harmonic autocorrelation trace.

** Other repetition rates within 10 to 100 MHz are available; specifications may change at different repetition rates.

*** PM fiber is an option.

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

