

## C-band Femtosecond Fiber Laser



### 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 0.5 ps
- Average power from 1 mW to 200 mW
- 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 0.5 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 200 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.

## Mendocino 1550 nm Technical Specifications

| Specifications                     | Low Power (1 mW - 4 mW)  | Medium Power (10 mW - 200 mW)                                       |
|------------------------------------|--|---|
| Central Wavelength (nm)            | 1550 (option: 1535-1560 tunable)                                   | 1550  |
| Average Power (mW)                 | 1 - 4  | 10 - 200  |
| Pulse Width (ps) *                 | 0.5  | 0.1   |
| Repetition Rate (MHz)              | Typical 20 - 50 (10 - 100 available)                               |   |
| Peak Output Power (W)              | 100 - 400  | 1 k - 10 k  |
| Spectral Width (nm)                | 5  | 30 - 40   |
| Timing Jitter (fs)                 | 60 (carrier offset 100 Hz - 1 MHz)                                 |   |
| Fiber Type                         | SMF-28 or PM fiber   |   |
| Polarization Extinction Ratio (dB) | 20   |   |
| Operating Temp (°C)                | 10 ~ 35  |   |
| Operating Voltage                  | Desktop: 85 - 264 VAC<br>Module: 5 VDC                             |   |
| Dimensions (cm)                    | Desktop: 34(w) x 40(d) x 9(h)<br>Module: 9.5(w) x 12.7(d) x 2.5(h) | Desktop: 34(w) x 40(d) x 9(h)<br>Module: 20.3(w) x 12.7(d) x 4.3(h) |

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

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

