L-band Femtosecond Fiber Laser

Applications

- OEM integration
- Optical high speed sampling
- Optical switching
- Optical metrology

Features

- Small footprint and ruggedized design
- Wavelength selectable from 1566 to 1587 nm
- Pulse width selectable from 0.3 to 1.2 ps
- Pulse width tunability
- Transform-limited output
- Linearly polarized output
- Minimal pulse pedestal
- Low timing jitter
- RF synchronization output

The L-band femtosecond fiber laser module (FPL-M1L) is the most compact of commercially available, passively mode-locked fiber lasers. The FPL-M1L laser features a robust architecture that is insensitive to shock and vibration and provides exceptional stability and reliability for demanding OEM applications. Advanced engineering design and consistent manufacturing process ensure the highest quality standards for OEM volume production. The wavelength can be selected from 1566 to 1587 nm. The pulse width is factory selectable from 0.3 to 1.2 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 at more than 10 MHz. An RF synchronization output is provided as a trigger signal. The FPL-M1L series can be either used as a stand-alone laser source with a 5 VDC power supply or a separate driver, or for integration as an OEM module. FPL-01L bench top series is also available.

Technical Specifications

| Model Number	FPL-01L-FF	FPL-M1L-FF
Pulse Width (ps)*	0.3 ~ 1.2 (selectable)	
Wavelength (nm)	1566 ~ 1587 (selectable)	
Repetition Rate (MHz)**	~ 10	
Average Output Power (mW)	>0.2	
Timing Jitter (fs)	60 (carrier offset 100 Hz ~ 1 MHz)	
Fiber Type	Panda PM	
Polarization Extinction Ratio (dB)	>20	
Spectral Width (nm)	2.5 (typical when pulse width is 1.0 ps)	
Operating Temp (°C)	15 ~ 30	
Operating Voltage (V)	85 ~ 264 AC	4.5 ~ 5.5 DC
Dimensions (cm)	34(w) x 42(d) x 9(h)	15.2(w) x 12.6(d) x 2.0(h)

* 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 are also available; specifications may change at different repetition rates.

Due to our continuous improvement program, specifications are subject to change without notice.
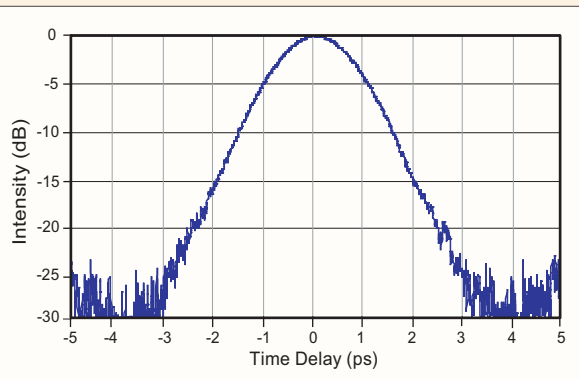
**Autocorrelation Trace Corresponding to a
Pulse Width of 1.0 ps**
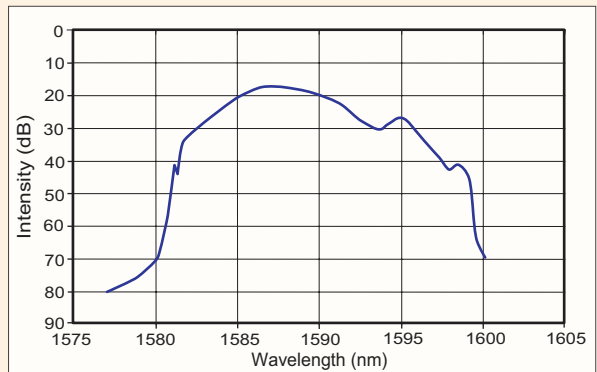
**Optical Spectrum Corresponding to a
Pulse Width of 1.0 ps**