1 µm Femtosecond Fiber Laser

Applications

- Both of benchtop and module for OEM integration
- Biomedical instrumentation
- Seeding high power picosecond lasers
- Optical high speed sampling
- Terahertz radiation
- Optical switching
- Materials characterization
- Optical metrology

Features

- Wavelength selectable from 1030 to 1065 nm
- Pulse width selectable from 0.7 to 10 ps
- Average power from 0.5 mW to 20 mW
- Pulse width tunability
- Near transform-limited output
- Linearly polarized output
- Minimal pulse pedestal
- Long term reliability
- RF synchronization output
- Cost effective

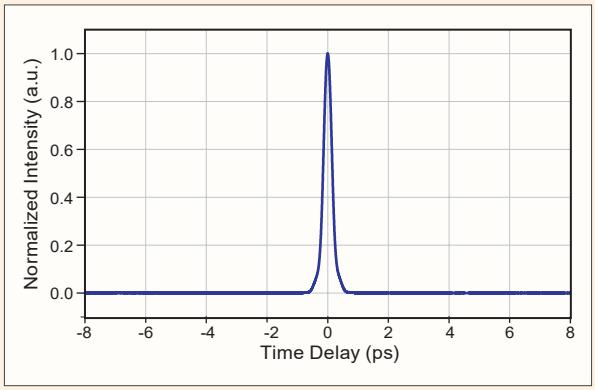
The 1 µm femtosecond fiber laser is a high quality and reliable passively mode-locked fiber laser. The module (FPL-M) series features a robust architecture that is insensitive to shock and vibration and provides exceptional stability and reliability for demanding OEM applications (especially, seeding high-power, picosecond lasers for glass cutting and consumer electronics manufacturing). Advanced engineering design and consistent manufacturing process ensure the highest quality standards for OEM volume production. The wavelength can be selected from 1030 to 1065 nm. The pulse width is factory selectable from 0.7 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 20 to 80 MHz. With up to 20 mW output power, the FPL-M series is the most economical solution for applications requiring a low power source. An RF synchronization output is provided as a trigger signal. The FPL-M series can be used either as a stand-alone laser source with a 5 VDC power supply or a separate driver, or for integration as an OEM module.

Mendocino 1030 - 1065 nm Technical Specifications

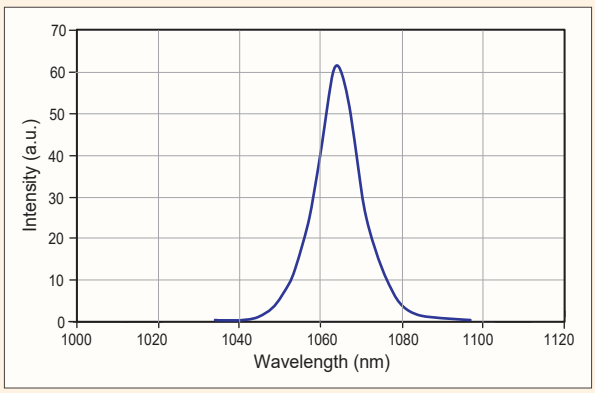
Specifications	Low Power	Medium Power without compression
Central Wavelength (nm)	1030 - 1065 (selectable)	
Average Power (mW)	0.5 - 2	10 - 20
Pulse Width (ps) *	0.7 - 1.2	3 - 10
Repetition Rate (MHz)	27 or 50 (20 - 80 available)	
Spectral Width (nm)	2 - 5	10 - 20
Timing Jitter (fs)	60 (carrier offset 100 Hz - 1 MHz)	
Polarization Extinction Ratio (dB)	> 20	
Termination	Fiber pigtail or free space	
Operating Voltage	Desktop: 85 - 264 VAC Module: 5 VDC	
Dimensions (cm)	Desktop: 34(w) x 40(d) x 9(h) Module: 9.5(w)x 12.7(d) x 2.5(h)	Desktop: 34(w) x 40(d) x 9(h) Module: 20.3(w)x 12.7(d) x 4.3(h)

* *A Gaussian pulse shape (convolution factor of 0.7) is used to determine the pulse width from the second harmonic autocorrelation trace.*

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



Autocorrelation Trace Corresponding to a Pulse Width of 0.27 ps



Optical Spectrum Corresponding to a Pulse Width of 0.27 ps

CALMAR LASER