MENDOCINO

1030 or 1064 nm Picosecond Fiber Laser

Applications

- Biomedical instrumentation
- Seed source for high power lasers
- Optical high speed sampling
- Ultrafast spectroscopy
- Materials characterization
- Optical metrology

Features

- Average power > 5 mW
- Central Wavelength of 1030 or 1064 nm
- Pulse width of 5 - 20 ps
- Near transform-limited, spectral width 0.1 - 0.5 nm
- Convenient fiber pigtail output
- Turnkey benchtop platform
- Integral optical monitor port

The benchtop (FPL-0) series is the perfect, economical, picosecond pulse optical source for a variety of test and measurement applications. Along with a portable design, the series offers user-friendly front panel control knobs for adjustment of the output power and pulse width. Different synchronization signals are available through a front panel RF output and an optical monitor port.

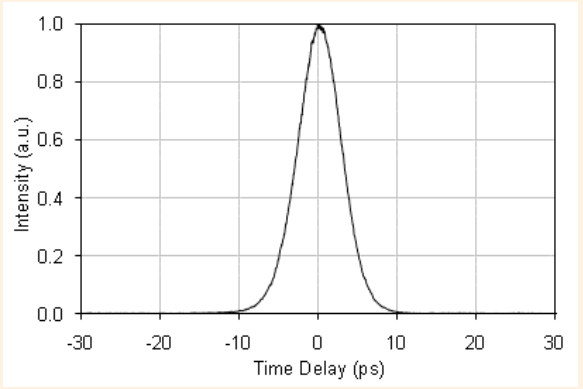
The 1 µm low power femtosecond fiber laser is a passively mode-locked fiber laser that provides a stable narrow band picosecond pulse output at either 1030 or 1064 nm. The laser utilizes the proprietary Mendocino saturable absorber technology, which has been developed and perfected over a twenty-year period, to deliver reproducible mode-locking at turn-on with excellent stability and reliability. It features a convenient fiber pigtail output with power levels up to 5 mW and optical pulses in the range of 5 – 20 ps, with near transformed-limited spectral width. The repetition rate can be specified as 20 ~ 100 MHz.

If higher output power is required or the performance parameters do not quite fit your application requirements, please contact us at sales@calmarlaser.com to discuss a customized solution.

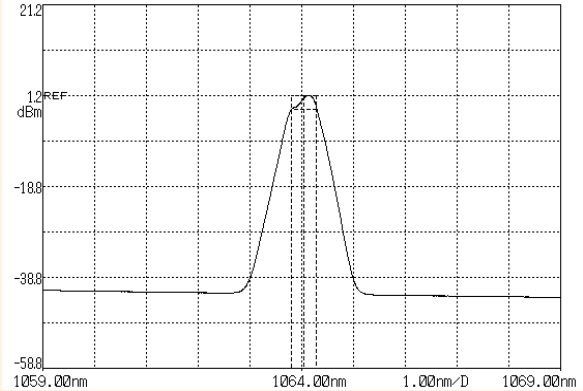
Technical Specifications[1]

Model Number	FPL-02UFFP
OPTICAL	
Central Wavelength[2] (nm)	1030 or 1064
Pulse Width[3] (ps)	5 - 20
Average Power[4] (mW)	> 5
Spectral Width (FWHM, nm)	~ 0.1 - 0.5
Repitition Rate[5] (MHz)	20 ~ 100
Power Stability over 8 hours[6] (%, RMS)	< 1.0
Beam Quality, M^2	< 1.1
Polarization Extinction Ratio (dB)	> 18
Output/Termination	PM-980 or HI-1060 fiber pigtail with FC/APC connector, key to slow axis
ELECTRICAL	
Electrical Synchronization (V)	~ 0.5, SMA connector
Supply Voltage (VAC)	85 - 264 autoranging
Supply Frequency (Hz)	47 - 63 autoranging
MECHANICAL	
Operating Temperature (°C)	15 - 30
Dimensions (cm)	34.9(W) x 43.7(D) x 10(H)
Weight (kg)	~ 6

1. Due to our continuous improvement philosophy, all product specifications are subject to change without prior notice. Please contact sales@calmarlaser.com for customized specifications.
2. Wavelength needs to be specified at the time of purchase.
3. A $sech^2$ pulse shape (deconvolution factor of 0.65) is used to determine the pulse width from the second harmonic autocorrelation trace.
4. From output port A, a monitor signal (~ 0.1 mW) is available from output port B. For higher output powers up to 200 mW, please contact sales@calmarlaser.com.
5. Repetition rate needs to be specified at the time of purchase. For other repetition rates, please contact sales@calmarlaser.com.
6. Requires an ambient temperature control of ± 1.0ºC.



Typical Autocorrelation Trace



Typical Optical Spectrum

CALMAR LASER

DANGER
INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE
TO DIRECT OR SCATTERED RADIATION
Wavelength 1um
Pulse Duration <5ps
Maximum Power <20mW
CLASS IIIb Laser Product