

1030 or 1064 nm High Power Femtosecond Fiber Laser



Applications

- Biomedical instrumentation
- Seed source for high power lasers
- Optical high speed sampling
- Terahertz radiation
- Materials characterization
- Optical metrology

Features

- Average power > 100 mW
- Central Wavelength of 1030 or 1064 nm
- Pulse width compressible to < 100 - 300 fs
- Convenient fiber pigtail output
- Turnkey benchtop platform
- Integral optical monitor port

The benchtop (FPL-0) series is the perfect, economical, short 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. Different synchronization signals are available through a front panel RF output and an optical monitor port.

The 1 μm high power femtosecond fiber laser is a passively mode-locked fiber laser that provides a stable 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 greater than 100 mW and optical pulses that are compressible to less than 100 fs. The repetition rate can be specified as 27, 55, or 100 MHz..

If a free-space compressed short pulse output 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 Specifications¹

Model Number	FPL-04UFF
OPTICAL	
Central Wavelength ² (nm)	1030 or 1064
Pulse Width ³ (ps)	~ 3 - 6 (compressible to 0.1 - 0.3)
Average Power ⁴ (mW)	> 100
Spectral Width (FWHM, nm)	> 20
Repetition Rate ⁵ (MHz)	27, 55, 100
Power Stability over 8 hours ⁶ (% , RMS)	< 1.0
Beam Quality, M ²	< 1.1
Polarization Extinction Ratio (dB)	> 20
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 sech² pulse shape (deconvolution factor of 0.65) is used to determine the pulse width from the second harmonic autocorrelation trace. If a free-space compressed short pulse output is required, please contact sales@calmarlaser.com.

4. From output port A, a monitor signal (~ 0.1 mW) is available from output port B.

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 ± 1.0°C.

