

780 nm Femtosecond Fiber Laser



Applications

- Biophotonics
- Terahertz generation
- Optical metrology
- Materials characterization
- Integrated circuit testing
- Seed source for higher energy laser systems

Features

- Average power > 30 mW
- Central Wavelength 780 nm
- Pulse width < 5 ps
- Convenient fiber pigtail output
- Turnkey benchtop platform
- Integral optical monitor port

The benchtop (FPL-0) series is the perfect short pulse optical source for 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 780 nm low power femtosecond fiber laser is a passively mode-locked fiber laser that employs nonlinear wavelength conversion to provide a stable short pulse output at either 780 nm. The desired wavelength needs to be specified at the time of purchase. 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 greater than 30 mW and an optical pulse of less than 5 ps.

If 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-03RFF
OPTICAL	
Central Wavelength ² (nm)	780 ± 3
Pulse Width ³ (ps)	< 5
Average Power ⁴ (mW)	> 30 at 80 MHz
Spectral Width (FWHM, nm)	~ 20 nm
Repetition Rate ⁵ (MHz)	50 ~ 80
Power Stability over 8 hours ⁶ (% , RMS)	< 1.0
Beam Quality, M ²	< 1.1
Polarization Extinction Ratio (dB)	> 18
Termination	PM fiber pigtail with FC/APC connector
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. The desired output wavelength needs to be specified at the time of purchase. For more details, please contact sales@calmarlaser.com.

3. A sech² 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.

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.

