

# Nanosecond & Sub-Nanosecond Pulsed Fiber Lasers

Pulsed Fiber Laser Series



MPBC's line of Nanosecond and Sub-Nanosecond Pulsed Fiber Lasers deliver optimal flexibility for application refinement. Controlled by our straightforward GUI interface, user-selectable parameters include power, repetition rate, pulse time delay and triggering mode - putting more options into the hands of the user.

Available in unique wavelengths, these compact, air-cooled, all-fiber lasers also feature extremely low jitter, excellent pulse-to-pulse stability and outstanding beam quality.

## Features

- Externally or Internally Triggerable
- Synchronized Output Pulses
- ps-level Jitter
- All-Fiber Design
- Excellent Beam Quality
- Highly Reliable, Maintenance-free
- Compact & Air-cooled

## Applications

- Super Resolution and Dual Photon Microscopy
- DNA Sequencing
- Military and Scientific Research

**NEW!**



## 589 & 655 Dual-Wavelength Pulsed Fiber Laser

An optimal STED Microscopy Source -  
Two lasers in a compact convenient package!

### SPECIFICATIONS

#### Visible Pulsed Fiber Lasers

Emission Wavelength*	514	532	589	DUAL 589 & 655	620	631	655	775	nm
Pulse Duration	1	1	0.7	0.7 & 0.7	0.9	0.9	0.7	0.9	ns
Average Power	2	5	2	2 & 2	0.5	0.5	2	5	W
Emission Linewidth (FWHM)	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	nm
Pulse Energy	40	100	25	25 & 25	10	10	25	80	nJ

#### NIR Pulsed Fiber Lasers

Emission Wavelength*	1028	1064	1178	DUAL 1178 & 1310	1310	1550	nm
Pulse Duration	1.2	1.2	1	1 & 1	0.9	0.9	ns
Average Power	4	10	4	4 & 4	4	10	W
Emission Linewidth (FWHM)	0.1	0.1	0.1	0.1	0.1	0.1	nm
Pulse Energy	80	200	50	50 & 50	50	160	nJ

#### Common Parameters

Repetition Rates*	40 - 100	MHz
Beam Waist Diameter	0.85 to 1.15 (1 typical)	mm
M <sup>2</sup>	< 1.15	-
Degree of Polarization	> 99	%
Pulse-to-Pulse Stability	< 6	%
Jitter (RMS)	< 10	psec
Maximum Long Term Output Power Drift (8 hrs)	2	%

#### Electrical Requirements

Voltage	90 - 250	VAC
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#### Dimensions

Fiber Laser (LxWxH)	490 x 436 x 80	mm
SHG (LxWxH)	144 x 50 x 30	mm

\* Other wavelengths and repetition rates are available on a custom basis

#### Externally Triggering Requirement

- Input trigger pulse amplitude 0.2-0.8V p-p with duty cycle 20-70%.
- The input is AC coupled and has 50 ohm impedance.
- CML, ECL or PECL formats are supported.
- Optical signal is synchronized with the trailing edge of the trigger pulse.

#### Sync Output Pulse

- Output PECL/ECL pulse synchronized with the trailing edge of the optical pulse.
- Output is AC coupled and matching 50 ohm impedance.
- When the laser is operating in external triggering mode the sync output pulse replicates the input triggering pulse. In internal triggering mode the output replicates the internal generator clock with 50% duty cycle.

MPB Communications draws on its wide-ranging expertise in fiber laser technologies to develop new products based on innovative requests. We specialize in offering our customers fully tailored solutions that meet demanding or unique applications. As all R&D and manufacturing is conducted in the company's North American facilities, we can ensure a high level of flexibility, control over quality and seamless transfer from prototype to market.