Narrow Spectrum Bandwidth Ultrafast Fiber Laser

– Active Mode-locking

Applications

- Amplifier seeding
- Materials characterization
- Diagnostics in biology and medicine
- Optical sampling
- Lidar

Features

- Narrow spectral width of 0.05 nm
- Repetition rate from 100 MHz to 2 GHz selectable
- Wavelength selectable over C-band or 1 μm band
- Pulse width tunable from 80 to 100 ps
- Average output power greater than 5 mW
- Linearly polarized output
- Transform-limited output
- Low timing jitter
- Minimal pulse pedestal

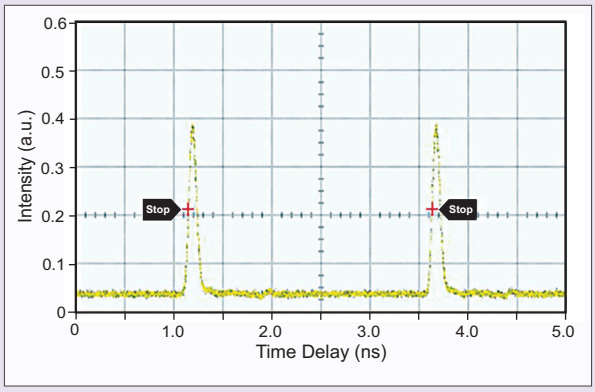
The C-band and 1 μm band narrow spectrum bandwidth ultrafast fiber lasers (PSLNB) are two actively mode-locked fiber lasers with spectral bandwidth of 0.05 nm and 0.04 nm, respectively. The PSLNB series operates from 100 MHz to 2 GHz, selectable in a compact and robust package that delivers stable and reliable laser performance for a variety of applications. The pulse width can be tuned from 80 to 100 ps with transform-limited pulse shape and a better than -20 dB pedestal. The timing jitter is as low as 75 fs and the side mode suppression is better than -75 dB. An option for 780 nm band is available.

Technical Specifications

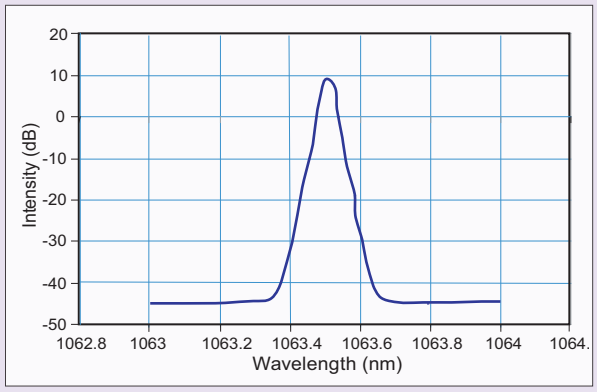
Model Number	PSLNB-00-CFT	PSLNB-00-UFT
Pulse Width (ps)	80 ~ 100 (tunable)	
Output Wavelength (nm)*	1530 ~ 1565 (selectable)	1020 ~ 1065 (selectable)
Output Spectral Bandwidth (nm)	~0.05	~0.04
Repetition Rate (MHz)	100 ~ 2000 (selectable)	
Timing Jitter (fs)	<75 (carrier offset 100 Hz ~ 1 MHz)	
Amplitude Noise (%)	<1	
Output Power (mW)	>5	
Operating Temp (°C)	15 ~ 30	
Operating Voltage (VAC)	85 ~ 264	
Dimensions (cm)	48(w) x 42(d) x 9(h)	

** 780 nm band is available.*

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



Oscilloscope Trace Corresponding to a Pulse Width of 90 ps and a Repetition Rate 400 MHz



Optical Spectrum Corresponding to a Pulse Width of 90 ps

CALMAR LASER