

# Polarization Maintaining Femtosecond Laser

1560nm Mode-locked Fiber Laser

## PFL-100

### Key Features

- Turn-key operation
- Femtosecond pulsewidth
- > 30 dB polarization extinction ratio
- < 1KHz repetition frequency drift @short time

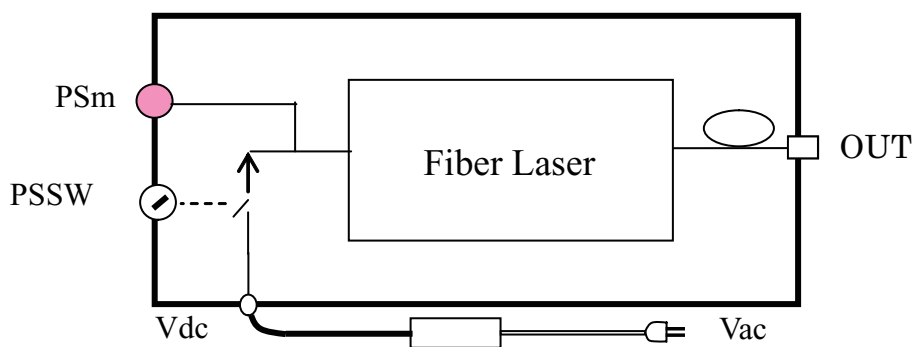


PFL-100 is a fiber-based mode-locked femtosecond pulse source incorporating carbon-nanotube mode-locker. It is suitable for optical measurement system and nonlinear process investigation. The laser is turn-key operation, compact, lightweight and low electrical power consumption. Additionally, it features a highly stable repetition frequency with low amplitude noise and timing jitter, which is excellent for numerous applications.

### Applications

- Nonlinearity investigation
- Supercontinuum generation
- Sampling pulse for high speed optical sampling
- Optical switching
- Laser Metrology
- High resolution OTDR

### Functional Diagram



### Specifications

Category	Parameter	Specification			Unit
		Min.	Typ.	Max.	
Optical Output	Average Power <sup>1</sup>	2			mW
	Wavelength	1555	1558	1561	nm
	Spectral width		3		nm
	Pulse width		600	1000	fs
	Repetition rate	35	40	45	MHz
	Timing jitter <sup>1</sup>			0.15	ps
	Polarization extinction ratio	30	35		dB
Connector	Optical output	SC/SPC			
Electrical	Power supply	DC 6V, 1A (AC Adaptor)			
	Power consumption	5W			
Operating Conditions	Operating Temperature	+15 to +35			
	Humidity (non-condensing)	<80% RH			
Physical	Dimensions (W x H x D)	170 x 70 x 230 mm			
	Weight	<3kg			

Note: The specifications are subjected to change without prior notice. Please contact Alnair Labs for more details.

1. Repetition rate at 40MHz.

### Typical Performance

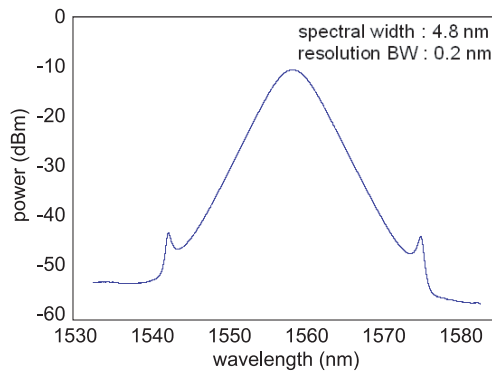


Fig. 1 Pulse spectrum.

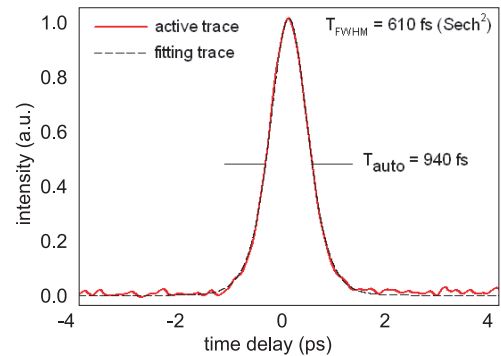


Fig. 2 Pulse autocorrelation waveform.

### Application Examples

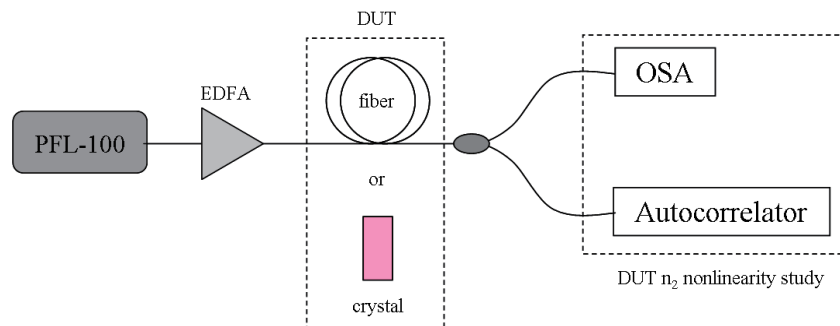


Fig. 3 Nonlinear studies of optical fibers or nonlinear crystals.

### Ordering Information

## PFL-100