

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

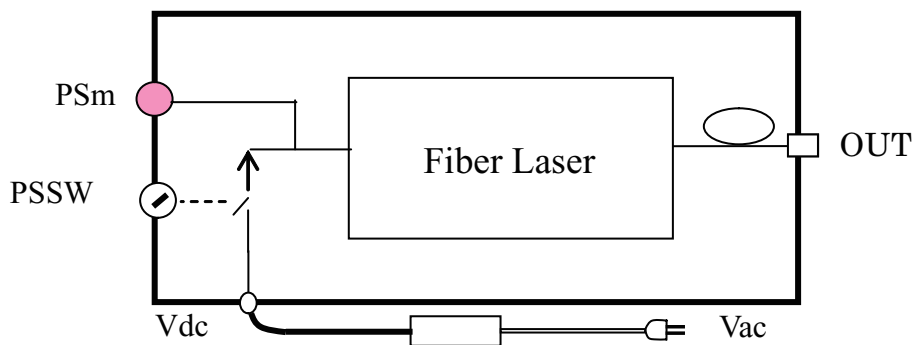


PFL-100 is a fiber-based mode-locked femtosecond pulse source incorporating carbon-nanotube mode-locker. It is suitable for optical measurement system and nonlinear process investigation. The laser is turn-key operation, compact, lightweight and low electrical power consumption. Additionally, it features 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 ¹ | 2 | | | mW |
| | Wavelength | 1555 | 1558 | 1561 | nm |
| | Spectral width | | 3 | | nm |
| | Pulse width | | 600 | 1000 | fs |
| | Repetition rate | 35 | 40 | 45 | MHz |
| | Timing jitter ¹ | | | 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

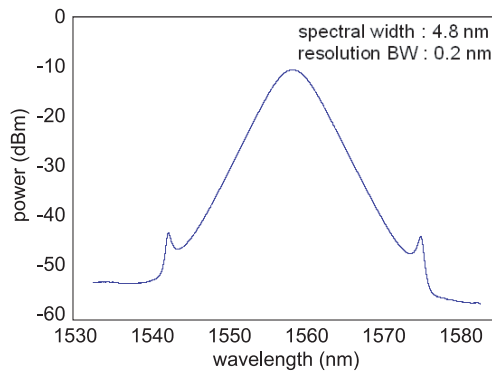


Fig. 1 Pulse spectrum.

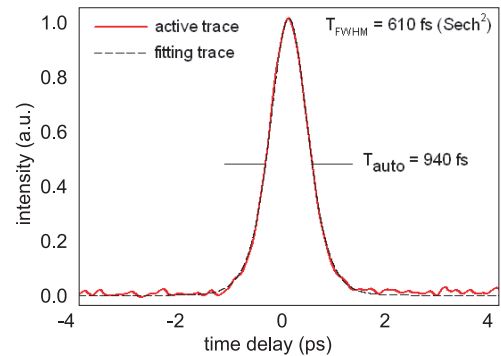


Fig. 2 Pulse autocorrelation waveform.

Application Examples

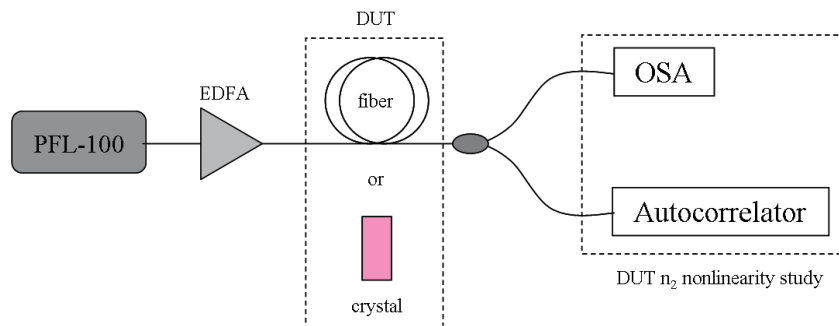


Fig. 3 Nonlinear studies of optical fibers or nonlinear crystals.

Ordering Information

PFL-100