

1 μ m Femtosecond Pulsed Laser

Calmar's FPL-01U is a 1 μ m seed laser and FPL-02U is an amplified version of FPL-01U with optical output power > 20mW. Both of them are passively mode-locked femtosecond fiber laser featuring wide range of pulse widths.

FPL-02UFF can generate optical pulses at fixed wavelengths while FPL-02UFT operates at a widely tunable range throughout 1030 ~ 1070 nm. The direct output from the laser produces high quality femtosecond optical pulses with characteristics of transform-limited and low pedestals.

Both FPL-01U and FPL-02U are simple and intuitive to operate. The operation is turn-key and requires no external RF source or warm-up.

The optional synchronization output frequency can be the fundamental or harmonic of the repetition rate of the laser.

FPL-01U and FPL-02U are versatile optical sources, ideal for applications such as biomedical instrumentation, terahertz imaging, semiconductor testing and metrology. They can also be used for micro machining and material processing after further amplification.



Features

- Pulse widths 0.4 ~ 10 ps selectable
- Wavelengths 1030–1070 nm tunable
- Transform-limited output
- Polarization maintaining
- Low pedestals
- No warm-up time required
- No external RF source required

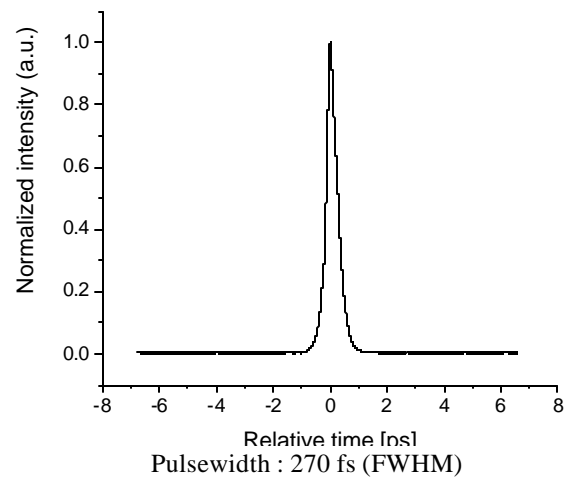
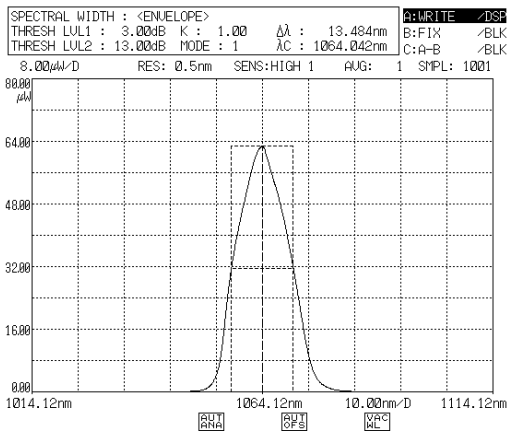
Optional Upgrades

- Repetition rate stabilizer
- Tunable repetition rate
- Pulse compression
- Enhanced output power
- Phase locking to external RF clock with ultra low jitter
- Synchronization output with customized bandwidth

Technical Specifications

Model Number	FPL-01UFF	FPL-01UFT	FPL-02UFF	FPL02UFT
Pulse width (ps)	0.4 ~ 10 (selectable)	0.4 ~ 10 (selectable)	0.8 ~ 10 (selectable) (0.2 ps compressible for pulse longer than 4 ps)	0.8 ~ 10 (selectable) (0.2 ps compressible for pulse longer than 4 ps)
Wavelength (nm)	1030 ~ 1070 (selectable)	1040 ~ 1065 (tunable) 1030 ~ 1070 (typical)	1030 ~ 1070 (selectable)	1040 ~ 1065 (tunable) 1030 ~ 1070 (typical)
Repetition Rate (MHz)	40 (other repetition rate within 20~100 MHz available)*			
Average Output Power (mW)	0.5 (1 mW typical)	0.2 ~ 1 (depending on wavelength)	> 10 (20mW typical)	> 10 (20mW typical)
Timing Jitter (fs)	<100 (Carrier offset 100 Hz ~ 1 MHz)			
Spectral Width (nm)	2 ~ 4	2 ~ 4	8 ~ 15	8 ~ 15
Polarization Extinction Ratio (dB)	> 20			
Dimension (cm)	34(w) x 42(d) x 9(h)			
Operating Temp (°C)	5 - 40			
Operating Voltage (VAC)	85 - 264			

* Specifications are subject to change without notice. 10/20/2006



Safety information: the product complies with FDA radiation performance standards 21 CFR 1040.10 and 1040.11