

## Femtosecond Pulsed Laser Module

Calmar's femtosecond fiber laser module FPL-M is the most compact optical short pulse generator commercially available. It can be used either as a stand-alone laser source with a 5V DC power supply or a separate drive or as an OEM module to be integrated into end user's application systems.

FPL-M is a passively mode-locked fiber laser module with high quality optical pulses (transform limited with low pedestals). The timing jitter from this module is as low as 100 fs. The optical wavelength can be customized throughout the C-band. It offers high peak power. The fixed repetition rates are available in the range of 10 ~ 100 MHz. The module can generate optical pulses in a selectable pulsewidth range within 0.1 ~ 20 ps.

FPL-M is simple to operate. The built-in electronics driver allows it to self-start and be remotely controllable. It features a RF synchronization output to provide trigger signals.

FPL-M's wide range of applications includes optical receiver characterization, optical high speed sampling, terahertz radiation, optical switching, material characterization, and optical metrology. If you want to apply a high performance short-pulse laser source for your limited space, this is an ideal solution.



### Features:

- Pulse widths and output power tunable
- Wavelength pre-selectable within 1535 ~ 1565 nm
- Transform-limited pulse with Low pedestals
- Synchronization output (SMA female)
- Small footprint
- No warm-up time required
- No external RF source required
- Stand-alone operation or OEM integration
- Easy to operate

### Optional Upgrades

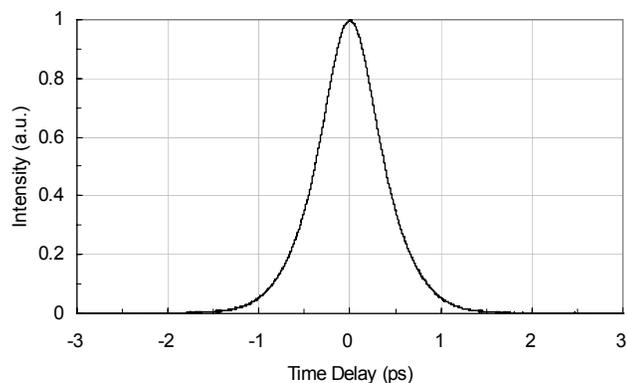
- PM Output

## Technical Specifications

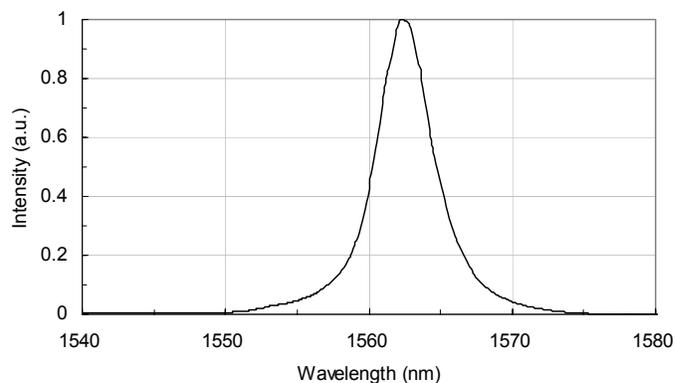
Model Number	FPL-M2-TF	FPL-M3-TF
Pulse width (ps)	0.3 ~ 5 (Fixed with a certain tunable range)	0.1 ~ 1 (Tunable)
Wavelength (nm)	1535 ~ 1565 (Fixed)	
Repetition Rate (MHz)	20 (Other repetition rate within 10 ~ 100 MHz available)	
Peak Output Power (W)	300 (Typical)	1k ~ 10k (Adjustable)
Average Output Power (mW)	5 (Typical)	20 (Typical)
Timing Jitter (fs)	< 100 (Carrier offset 100 Hz ~ 1M Hz)	
Spectral Width (nm)	5 (Typical)	20 (Typical)
Operating Voltage (V)	4.5 ~ 5.5 DC	
Dimensions (cm)	9.5(w) x 12.7(d) x 2.0(h)	

*Not all specifications can be combined together, please call manufacturer for customization.*

*Specifications are subject to change without notice - 8/12/2004*



Autocorrelation trace of pulsewidth 500 fs



Optical spectrum trace of pulsewidth 500 fs