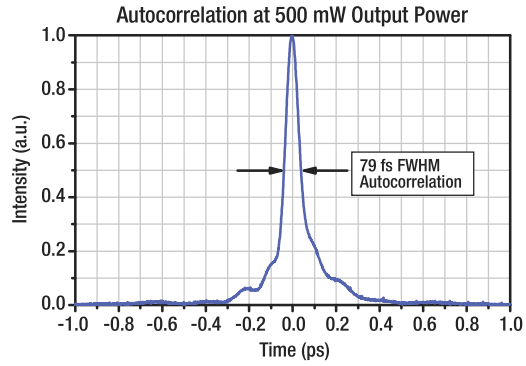
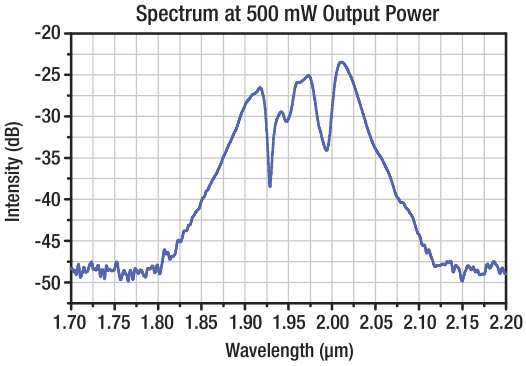
2 µm Femtosecond Fiber Laser

FSL1950F

Thorlabs' FSL1950F is an ultrafast laser with emission centered at 2 µm. By providing <80 fs pulse widths with >500 mW average output power at a repetition rate of 50 MHz, the FSL1950F enables a wide range of applications.

This femtosecond laser is based upon an oscillator-amplifier combination that uses only polarization-maintaining fiber, yielding reliable turnkey operation and exceptional long-term reliability. The pulses are delivered through a pigtailed FC/APC-terminated fiber, providing compatibility with free-space coupling optics, such as a fiber collimator or coupler. A version of the FSL1950F with a collimated free-space output is available by contacting techsupport@thorlabs.com.





These autocorrelation and spectrum plots are provided as a reference and not guaranteed.

LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT

Features

- 2 µm Center Wavelength
- Ultrashort Pulses (<80 fs FWHM)
- High Power
  - >500 mW Average Output Power
  - >10 nJ Pulse Energy
- All Polarization-Maintaining Fiber Design
- Reliable Passive Mode-Locking Using a Saturable Absorber
- Turnkey Operation and Exceptional Long-Term Stability
- Pigtailed, FC/APC-Terminated Delivery Fiber
- Free-Space Version Available Upon Request

Applications

- MIR Supercontinuum Generation
- MIR Frequency Combs
- Seeding of Thulium- or Holmium-Doped Amplifiers
- Ultrafast Spectroscopy
- Material Characterization
- Nonlinear Optics

Specifications

Item #	FSL1950F
Center Wavelength	1950 nm ± 30 nm
Pulse Width	<80 fs (FWHM)
Output Power	>500 mW (Average)
Repetition Rate	50 MHz (Nominal)
Pulse Energy	>10 nJ
Polarization Extinction Ratio[a]	>15 dB
External Sync Output	SMA Connector
Fiber Specifications	
Connector Type	2.0 mm Narrow Key FC/APC
Mode Field Diameter	~12 µm
Fiber NA	0.13
Length	12" (30 cm) Nominal

a. The output polarization is parallel to the fiber alignment key.