

Femtosecond Fiber Lasers



Tamarack and Buccaneer Femtosecond Fiber Lasers

- Ultrashort pulse duration down to 50 fs
- Small footprint
- Turn-key operation
- High stability
- Optional benchtop version



Tamarack Er-doped fiber laser system

Product overview

Fiber-based femtosecond lasers offer robust and stable operation without the need for constant realignment. The low cost and stability of fiber-based femtosecond lasers mean that even beginner research labs can have a femtosecond pulse source without the need for expensive or complicated equipment. This brings ultrafast research into the realm of undergraduate and other educational environments.

With pulse lengths of 100 fs at 1550 nm fiber femtosecond lasers can also be used as seed sources for femtosecond amplifiers. The 1550 nm wavelength of Er-doped fiber lasers also makes them an attractive tool for ultrahigh-speed optical communications applications.

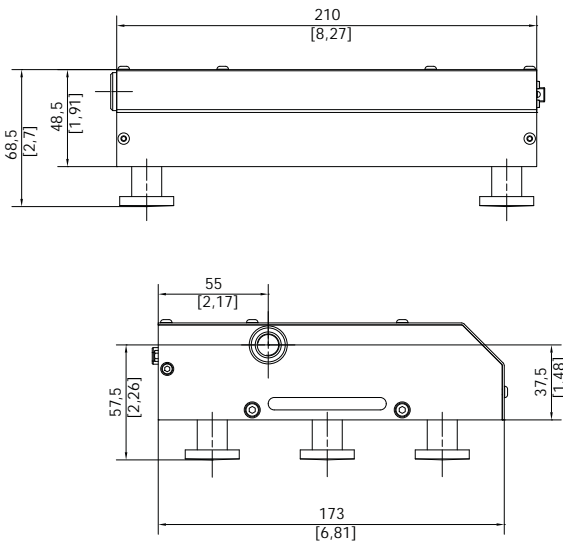
Possible application of the Tamarack fiber lasers:

- Amplifier systems seeding
- Terahertz generation and detection
- Multi-photon microscopy
- Frequency metrology
- Ultrafast spectroscopy
- Semiconductor device characterization
- Supercontinuum generation
- Optical coherence tomography
- Telecommunications

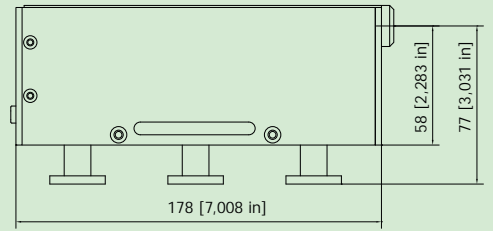
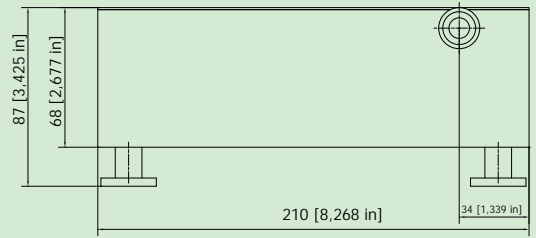
Fiber lasers technical specifications

	Tamarack-80	Tamarack-150	Buccaneer SHG
Pulse Width (FWHM), fs	<80	<100 - 250*	150 - 300*
Operating Wavelength, nm	1560±10 (fixed)		
Average Output Power, mW	10	20	>150
Peak Output Power, kW	up to 1		up to 10
Repetition Rate, MHz	70	25-120*	40-85*
Outputs:	Power output: 10 mW, TEM ₀₀ , linearly polarized or fiber output (FC/APC) Service optical output: FC/APC (~1 mW) RF SYNC Out: SMA connector Mode Lock Status: SMA connector (3.5/0V) and Led		Power output: >150 mW, TEM ₀₀ , linearly polarized or fiber output (FC/APC) Service optical output: FC/APC (~1 mW) RF SYNC Out: SMA connector Mode Lock Status: SMA connector (3.5/0V) and Led
Oscillator Dimensions, mm	180x210x50		180x210x70
Power Unit Dimensions, mm	230x200x850		230x200x130

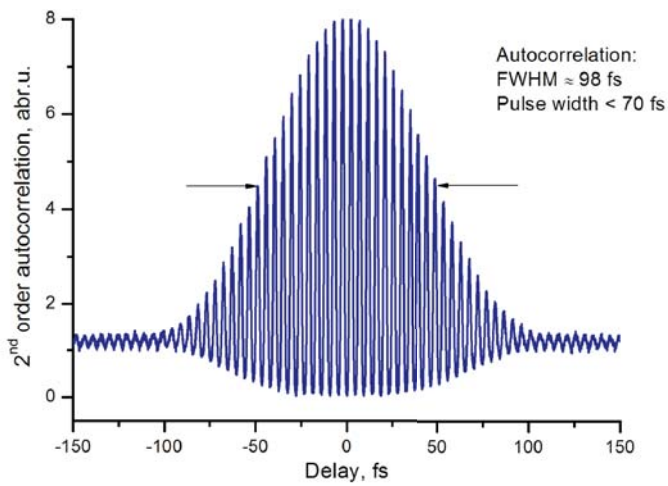
* - according to customer's specification



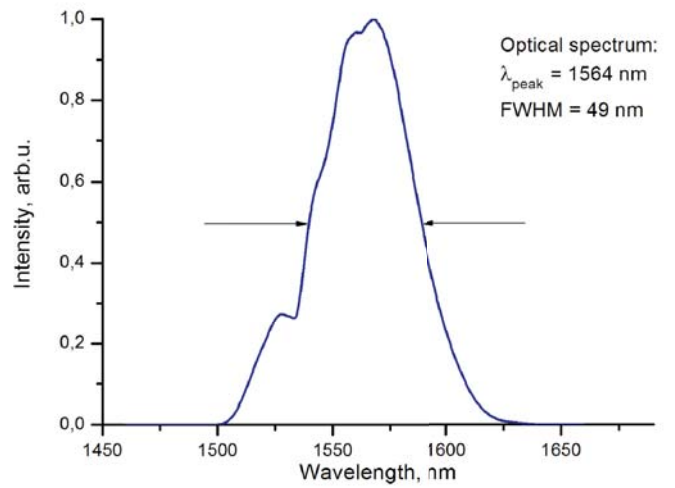
Tamarack-150 (mm [inches])



Buccaneer (mm [inches])



Tamarack-80 autocorrelation trace



Tamarack laser system