

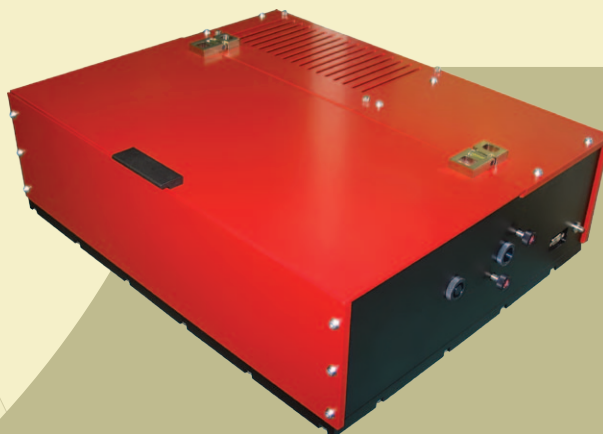


Femtosecond Solid-State Lasers



Ti:Sapphire Femtosecond Laser TiF-50

- Tuning range: 730-950 nm
- Pulse duration: <50 fs
- Output power up to 1.2 W (@10W pump laser)
- Thermostabilized main breadboard
- Motorized USB wavelength tuning
- Electromagnetic starter
- Tunable fs/CW switchable regimes (optional)



The TiF-50F Ti:Sapphire femtosecond laser with an integrated pump source

Product overview

The TiF-50 laser system offers a balanced approach: less than 50-fs pulse duration over a broad tuning range. The unit is a flexible tool suitable for numerous applications and can really be a workhorse for many different projects going on simultaneously.

The system can be supplied in two basic configurations: the TiF-50, being a stand-alone version for pumping with an external pump laser; or the TiF-50F system which may be integrated with an industry-standard pump laser on site or at our factory. However, the dimensions of the Ti:S laser head are the same for either version, the stand-alone version may later be fitted with an integrated pump laser at minimum additional cost. The acceptable pump laser power for the TiF-50/TiF-50F is up to 10 W. See tuning curves for output power vs. wavelength dependence.

The system also can be equipped with an optional birefringent filter and optional etalons providing narrowband tunable CW regime over the whole tuning range.

An external prism pair or a tunable pulse compressor (model APC) for dispersion pre-compensation is also available.

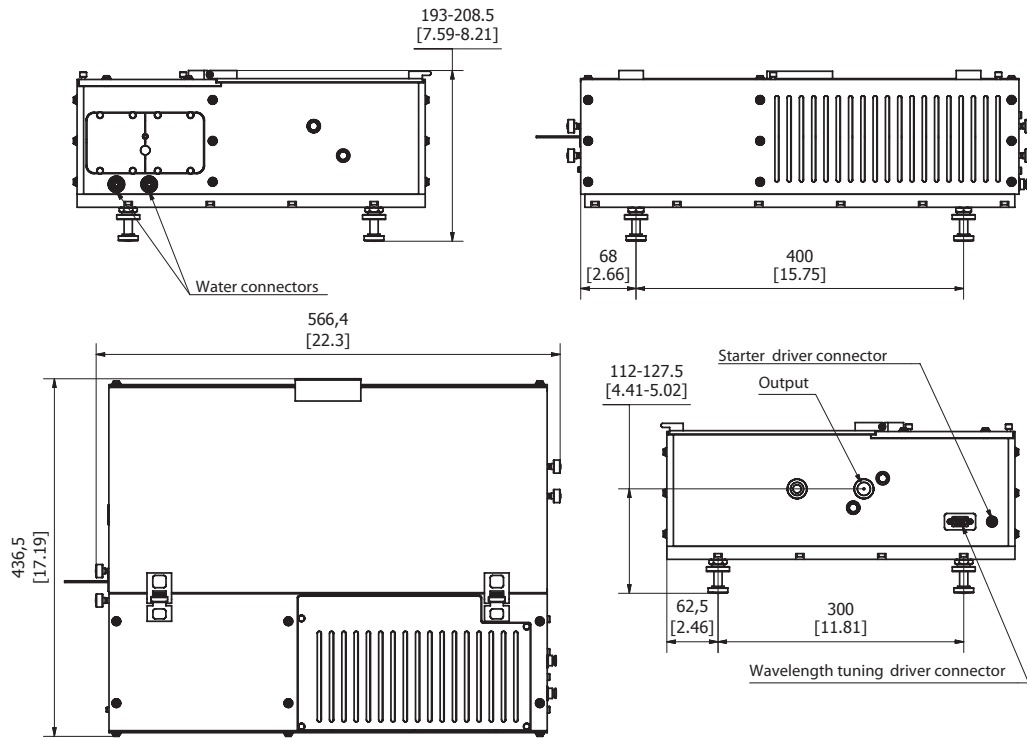
	TiF-50 (stand-alone) TiF-50F (integrated pump)
Output pulse duration	<50 fs
Spectrum width @ 800 nm	>20 nm
Central wavelength tuning (@4 W pump and up)	730-950 nm
Output power @ 800 nm	300 mW @ 3 W pump 900 mW @ 7 W pump 1200 mW @ 10 W pump
Repetition rate	80 MHz
Max. pump power	10 W
Beam quality	TEM ₀₀
Polarization, linear	horizontal
Beam divergence	<1 mrad
Stability	<1% rms
Electronic starter	yes
Thermostabilized breadboard	yes
Dimensions	610x450x197 mm

Applications:

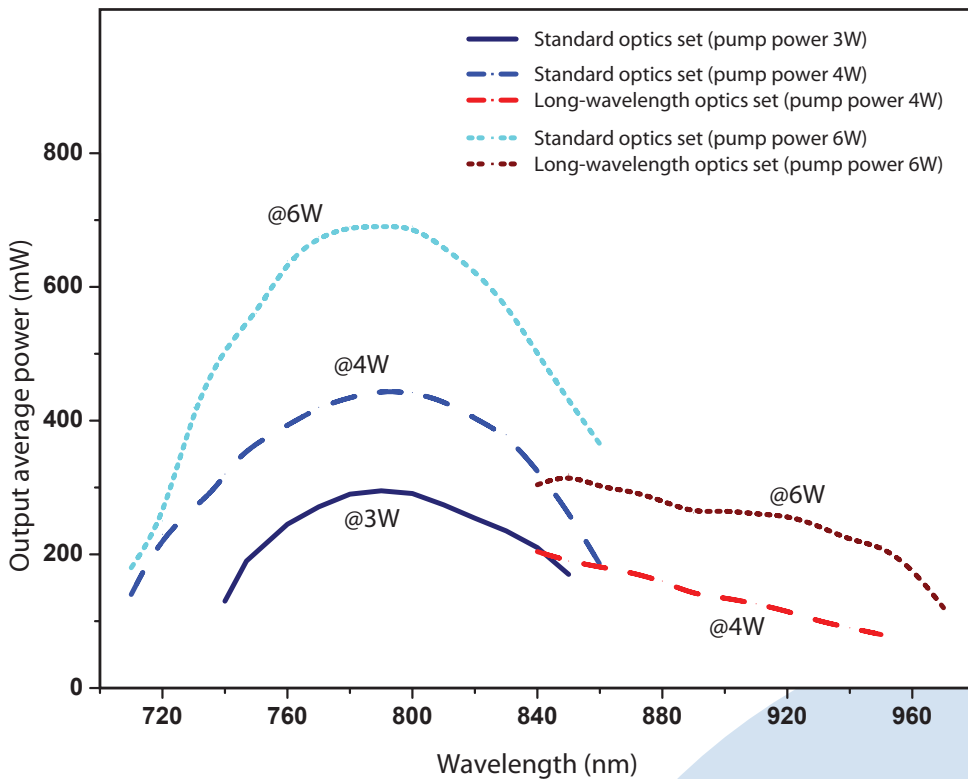
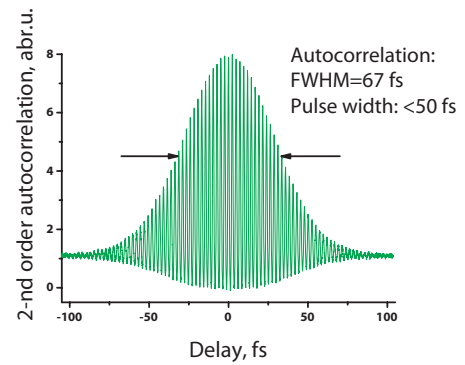
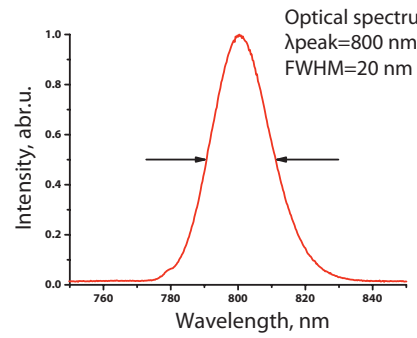
- Multiphoton microscopy
- Seed oscillator for amplifier systems
- Terahertz generation
- "Pump-probe" spectroscopy
- Material processing
- Optical coherent tomography



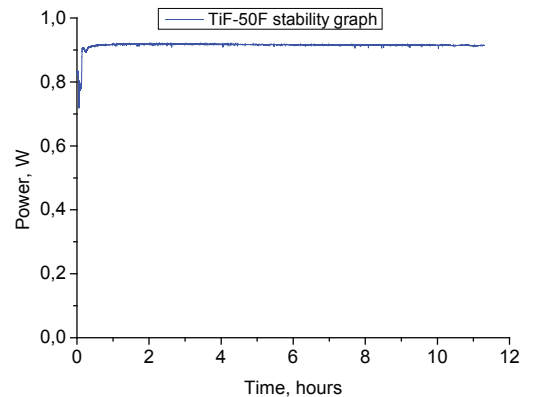
Ti:S and Cr:F kits are available. Please contact us for details.



TiF-50 / TiF-50F (mm [inches])



TiF-50 wavelength tuning curves



Acquired using an integrated Laser Quantum "Finesse" 6 W, 532 nm pump laser, at an ambient temperature of 22 degrees C and coolant (distilled water) temperature of 20 degrees.