

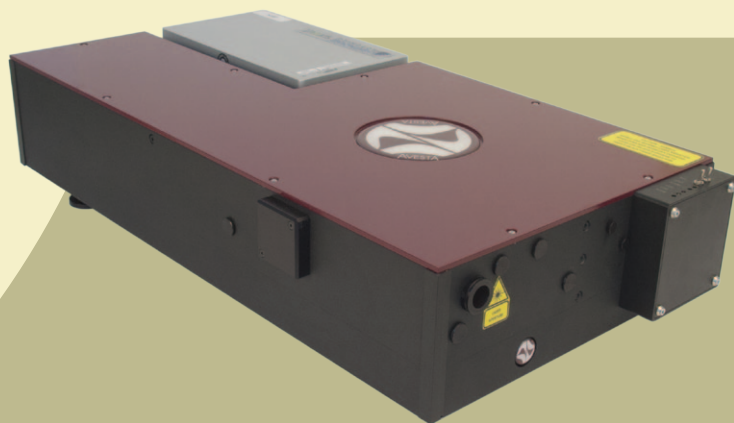


Femtosecond Solid-State Lasers



Ti:Sapphire Femtosecond Laser TiF-15

- Tuning range: 760 - 840 nm (@30 fs)
- Pulse duration: <15 fs
- Output power up to 500 mW (@6W pump laser)
- Thermostabilized main breadboard (for TiF-15F)
- Motorized USB wavelength tuning
- Electromagnetic starter



The TiF-15F6 Ti:Sapphire femtosecond laser with an integrated pump source

Product overview

The TiF-15 laser system offers the shortest available pulse duration in the TiF family of Ti:S femtosecond laser oscillators. It is a robust tool for cutting-edge ultrafast research.

The system can be supplied in two basic versions: the TiF-15, being a stand-alone version for pumping with an external pump laser; or the TiF-15F 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-15/TiF-15F is up to 6 W.

The system is designed to operate 24/7 as a seed oscillator for our larger amplifier systems and thus inherits all the stability-enhancing design features. The system may be supplied pre-tuned to one of the two available pulse duration configurations, with all the components inside the box being the same. An external prism pair or tunable pulse compressor (model APC) for output pulse chirp compensation and pre-compensation are also available.

TiF-15 technical specifications

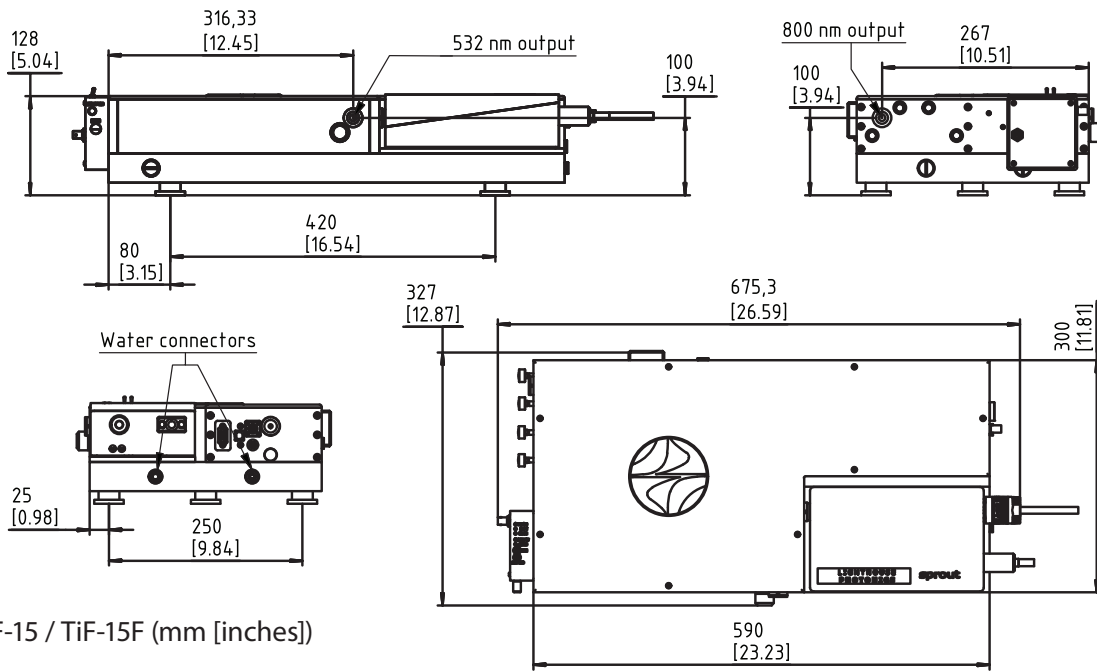
	TiF-15 (stand-alone) TiF-15F (integrated pump)	
Factory pulse duration*	<15 fs**	<30 fs**
Spectrum width @ 800 nm	>70 nm	>30 nm
Central wavelength tuning	fixed	760-840 nm
Output power @ 800 nm	>230 mW @ 3 W pump	>300 mW @ 3 W pump >500 mW @ 6 W pump
Repetition rate	90 MHz	80 MHz
Max. pump power	6 W	
Beam quality	TEM ₀₀	
Polarization, linear	horizontal	
Beam divergence	<1 mrad	
Stability	<1% rms	
Electronic starter	yes	
Thermostabilized breadboard	yes	
Dimensions	650 x 330 x 128 mm	

* - the laser is tuned to either initial configuration at our factory. Later on-site realignment by the user or our engineer is possible.

** - with external group velocity dispersion compensation.

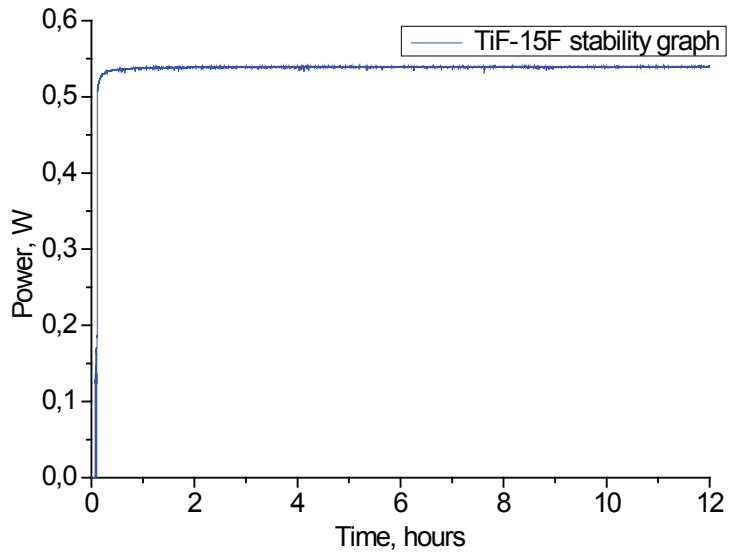
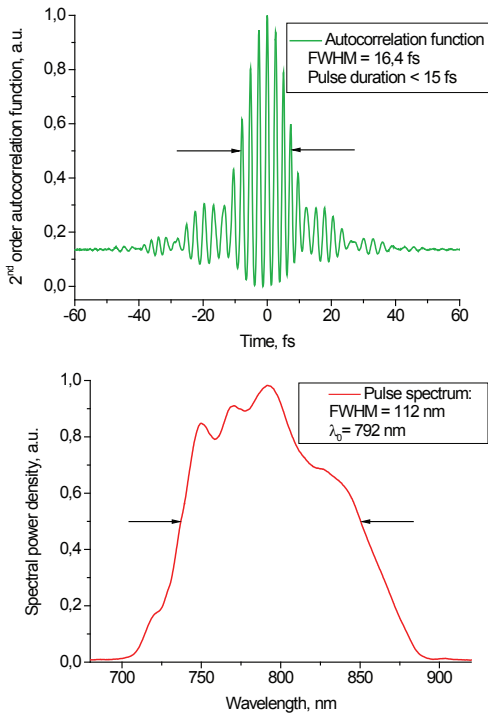
Applications:

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



TiF-15 / TiF-15F (mm [inches])

TiF-15 specs in a 15-fs tuning



Acquired using an integrated Lighthouse Photonics «Sprout D5N» 5 W, 532 nm pump laser, at an ambient temperature of 22 degrees Celcius and coolant (distilled water) temperature of 20 degrees.

TiF-15 specs in a 30-fs tuning

