

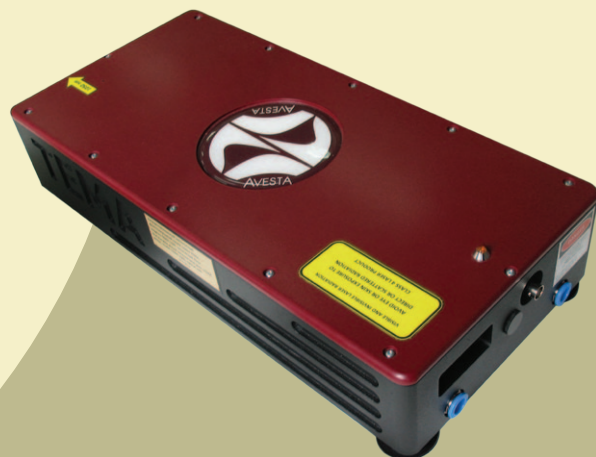


Femtosecond Solid-State Lasers



TeMa Yb Femtosecond Laser

- Output power >6 W at 1050 nm
- Optional SHG with >3 W at 525 nm output
- Small footprint
- Integrated pump source
- Short pulse duration <100 fs
- Highly stable
- Self-starting of femtosecond regime
- External compressor down to <15 fs (optional)



TeMa femtosecond laser with its control unit

Product overview

The Yb-doped TeMa laser radiates at around 1-um wavelength with high average power, enabling the user to enjoy Ti:S-like power ratings at over-micron wavelengths. This design features integrated pump diode module for greater system stability and turn-key operation. The solid-bulk body of the laser ensures maximum rigidity, while self-starting design provides for easy "plug-and-play" operation.

Two basic models differ in pulse duration and output average power: the TeMa-100 model features optimized pulse duration, while the TeMa-150 outputs maximum average power. An optional SHG extension provides powerful fs radiation in visible range, and an optional pulse compressor enables 15-fs pulse width generation.

Possible application of the TeMa laser:

- Seed oscillator for amplifiers
- Multi-photon excitation microscopy
- Pump-probe spectroscopy
- Supercontinuum generation
- Generation of terahertz radiation
- Time-resolved spectroscopy
- Optical coherent tomography

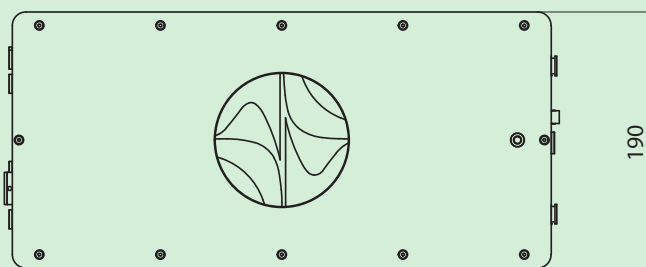
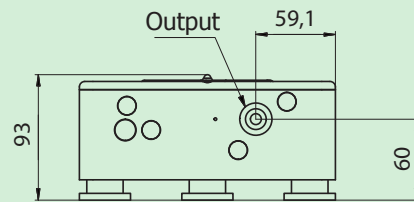
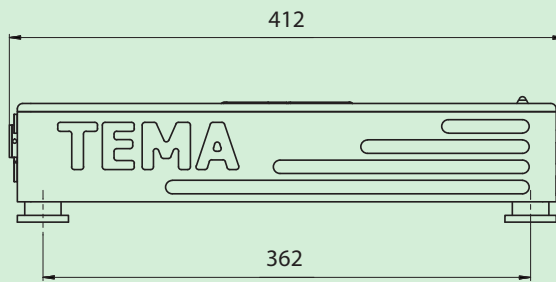
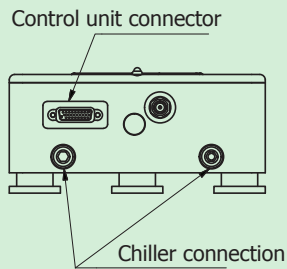
TeMa technical specifications

	TeMa-100	TeMa-150
Pulse duration (FWHM)*	<100 fs	<200 fs (<150 fs typical)
Wavelength (fixed)	1050±5 nm	
Output power*	>3.5 W	>6 W
Output power** @525±2 nm	>1.7 W	>3 W
Pulse energy*	>50 nJ	>85 nJ
Repetition rate (fixed)*	70±5 MHz	
Output power stability***	<1% rms	
Spatial mode	TEM ₀₀	
Polarization, linear	>100:1 (horizontal)	
Laser head dimensions	412x190x93 mm	
Power supply dimensions	290x200x80 mm	

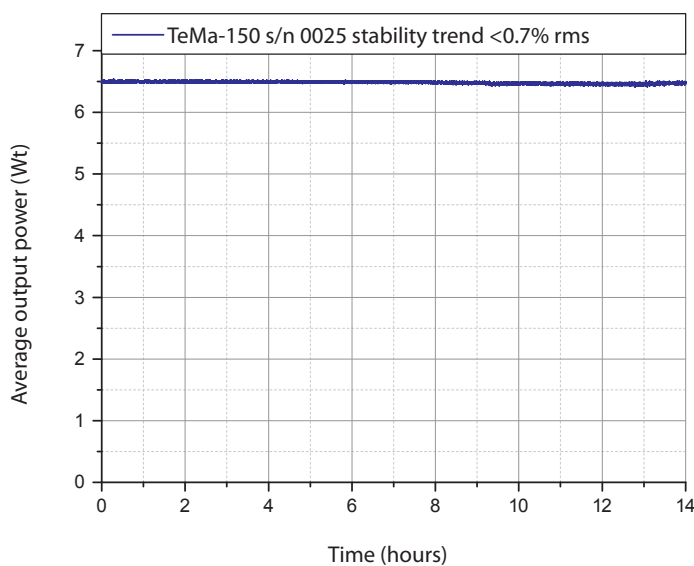
* - custom values available upon request; pulse duration down to 15 fs is available with optional external compressor;

** - with optional SHG extension;

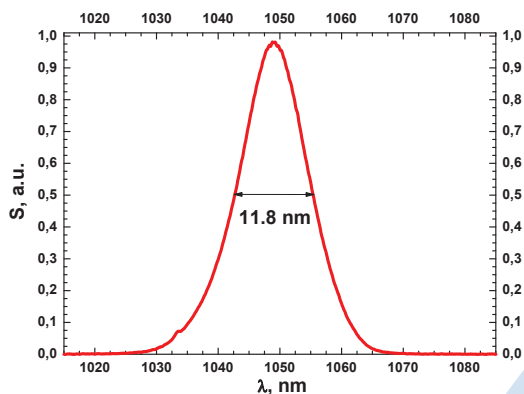
*** - at equal room conditions over 12 hours after 30 minutes of warm-up.



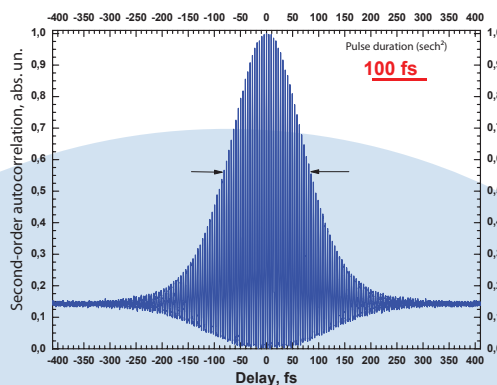
TeMa dimensions, mm



TeMa stability graph



TeMa typical generation spectrum



TeMa autocorrelation trace