

Zeus-10. Femtosecond Ti:Sapphire Laser



Product overview

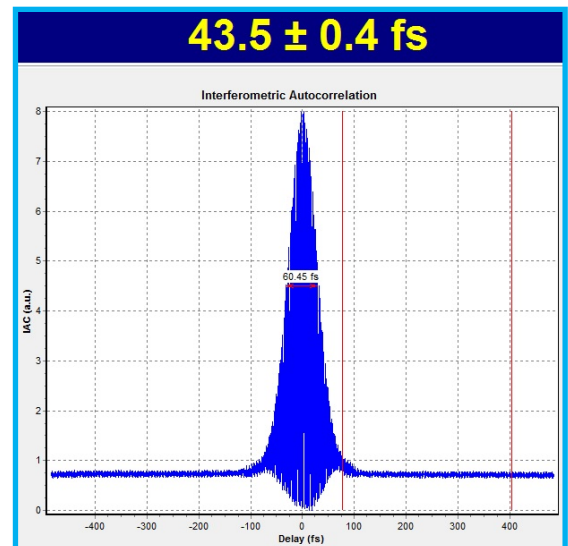
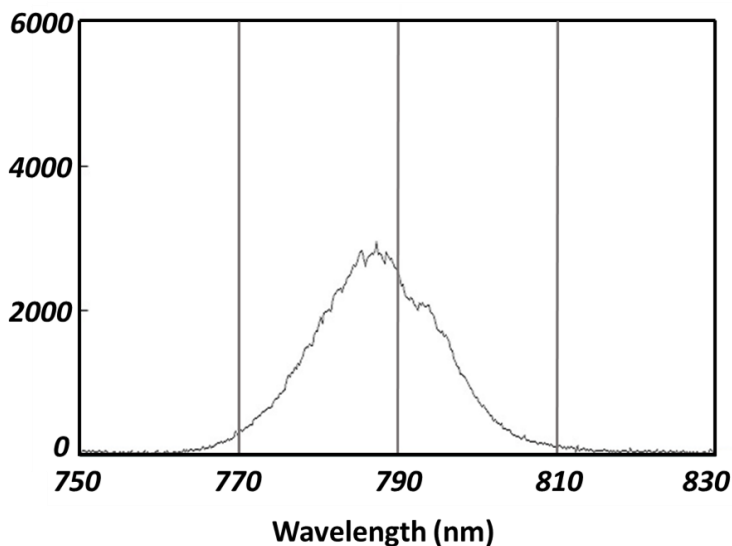
The novel Zeus-10 system is NLS's tunable ultrashort-pulsed Ti:sapphire based oscillator. It produces output pulse duration shorter than 50fs with the tuning range of $790 \pm 10 \text{ nm}$. The main advantage of the Zeus-10, is the extremely high stability, very short pulses and the possibility of changing the central wavelength in the range of 20nm. The optional "NLS control" package includes built-in spectrometer and power meter and a software for automatic mode -lock start and monitoring.

Features

- Average powers up to $> 250 \text{ mW}$
- Maximum pulse energy $> 2 \text{ nJ}$
- Pulse duration $< 50 \text{ fs}$
- Integrated diode pump source with control unit
- Integrated spectrometer and power meter (optional)
- Automatic mode-locking (optional)

Applications

- Ultrafast amplifier seeding
- Pumping OPOs
- Materials Research
- Femtochemistry
- Spectroscopy
- THz generation and detection
- Ultrafast Imaging
- 2-photon polymerization



Technical Specifications

Zeus-10	
Spectrally-limited pulse duration	< 50fs
Spectrum width	> 20nm
Tuning range	790 ± 10nm (fixed)
Average output power	> 250mW
General optical specifications	
Pulse repetition rate (fixed)	90 ± 10MHz (fixed)
Pump source	integrated, direct diode pump
Spatial mode	TEM₀₀
Beam diameter (1/e²)	< 2mm
Output polarization	Linear, Horizontal
Long-term stability	< 1%rms
Physical dimensions (L × W × H)	
Laser head dimensions	90 × 60 × 20cm³
Pump laser control unit dimensions	33 × 32 × 37cm³
chiller dimensions	58 × 30 × 47cm³
Environmental and utility specifications	
Operating temperature	23 – 28°C
Relative humidity	< 60%
Voltage	single-phase; 220VAC; 50Hz
Power consumption	< 1KW
Optional package specifications	
NLS control	<ul style="list-style-type: none"> • built-in spectrometer and power meter • software for automatic mode-lock start and monitoring

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