

High-Energy OPCPA Systems

Multi-TW peak-power pulses at up to 1 kHz

Few-cycle pulse duration and high pre-pulse contrast

Exceptional CEP and pulse energy stability

800 nm, 1600 nm, 2000 nm output

Robust design with a warm-up time of < 1 hour

Spectral-temporal pulse shaping options



Specifications

Center wavelength	800 nm	1600 nm	2000 nm
Pump source	Picosecond Nd:YAG lasers, seeded by ORPHEUS-OPCPA		
Repetition rate	10 Hz – 1 kHz		
Maximum output pulse energy ¹⁾	250 mJ	100 mJ	50 mJ
Pulse duration ¹⁾	< 9 fs	< 50 fs	< 30 fs
CEP stability, 1 h ^{1) 2)}	< 250 mrad		
Long-term power stability, 8 h ^{1) 3)}	< 1.5%		
Pulse-to-pulse energy stability, 1 min ^{1) 3)}	< 1.5%		

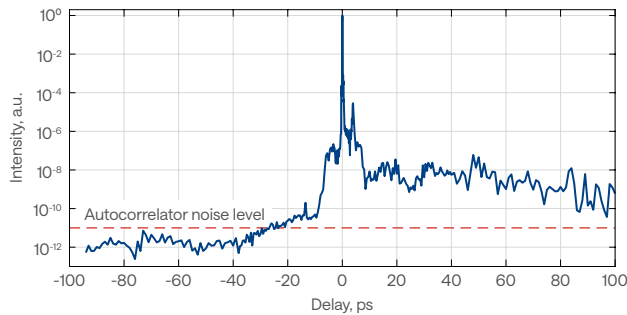
¹⁾ Typical values. For custom inquiries, contact sales@lightcon.com.

²⁾ CEP values calculated from unaveraged, single-shot measurements.

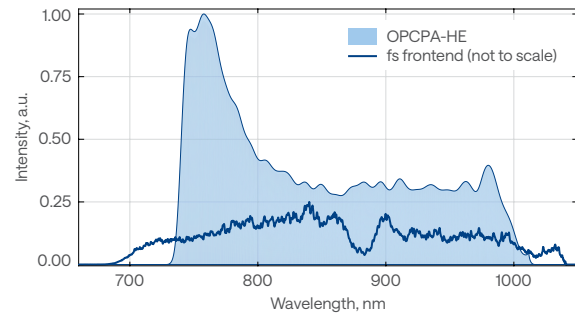
³⁾ Expressed as as normalized root mean squared deviation (NRMSD).



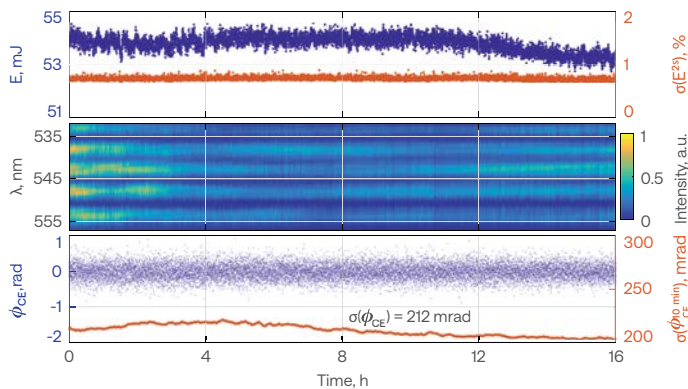
OPCPA-HE system high-dynamic-range third order autocorrelation measurement at 800 nm



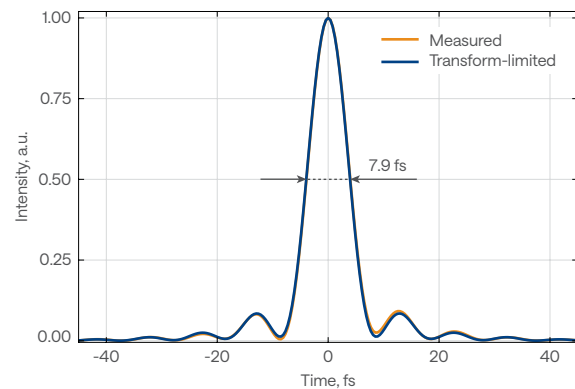
OPCPA-HE output spectrum at 800 nm



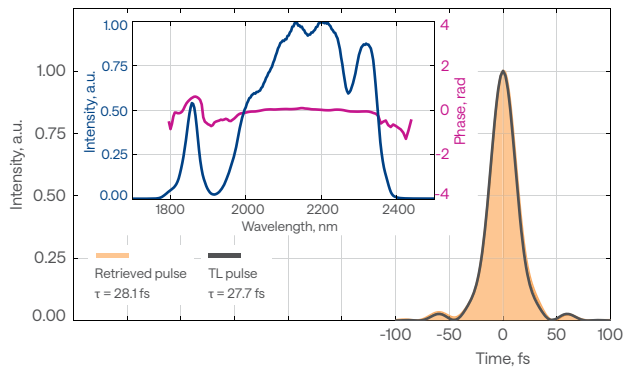
OPCPA-HE pulse energy, f-2f interferogram and CEP stability measured over 16 h at 800 nm



OPCPA-HE output pulses' temporal profile measured with a self-referenced spectral interferometry device at 800 nm



OPCPA-HE output pulses' temporal profile at 2 μm



OPCPA-HE pulse-to-pulse energy stability at 2 μm

