

OPCPA | HE

Pumped by Picosecond Nd:YAG Lasers, Seeded by ORPHEUS-OPCPA

Applications like high energy attosecond pulse generation, generation of high harmonics from solid targets, and laser electron acceleration all benefit from few-cycle pulse durations and excellent pulse contrast while requiring multi-millijoule pulse energy. Our most powerful systems, scalable to multi-TW peak powers at kHz repetition rate while maintaining few-cycle pulse durations, will fit the most demanding requirements, while providing stability and reliability unprecedented for systems of this scale.

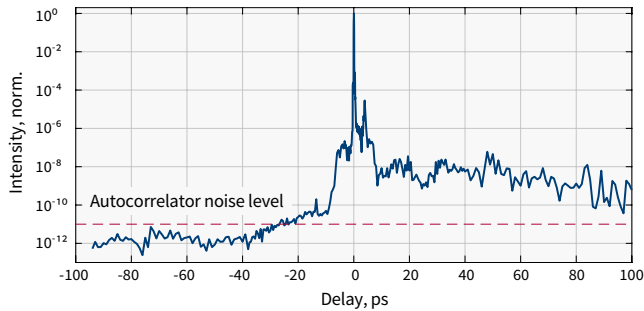
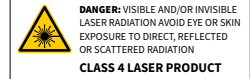


SYLOS has been launched in ELI-ALPS facility in Hungary on 15th of May, 2019

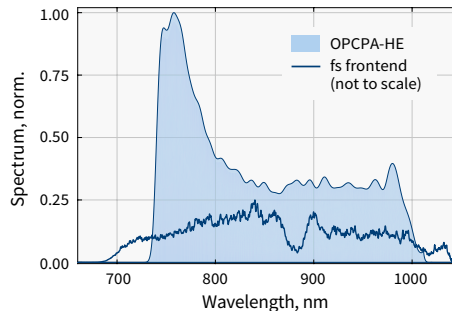
CONFIGURATIONS EXAMPLES

Wavelength	800 nm	900 nm	1.6 μm	2 μm
Pulse duration	< 9 fs	< 6.5 fs	< 50 fs	< 30 fs
	Repetition rate		Pulse energy / Output power	
HE-100 ¹⁾	100 Hz	50 mJ	35 mJ	100 mJ
HE-1000 ²⁾	1 kHz	50 mJ / 50 W	35 mJ / 35 W	100 mJ / 100 W

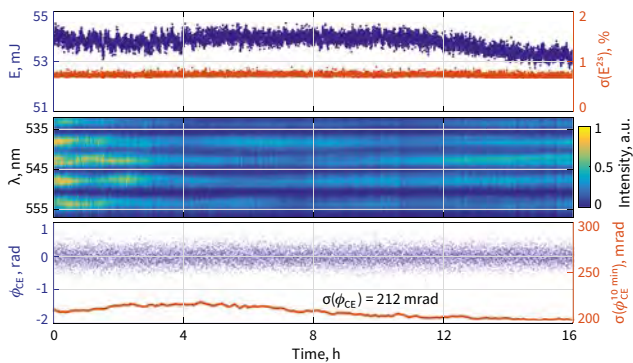
- 1) Cost-effective highly-stable multi-TW source.
- 2) Cutting-edge combination of peak and average power.



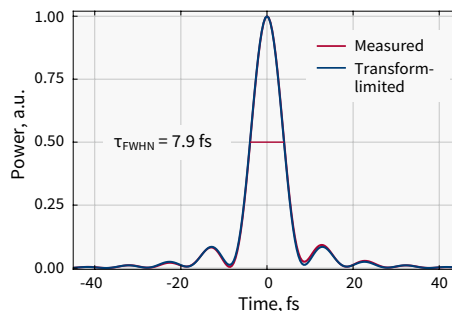
High-dynamic-range third order autocorrelation measurement of an OPCPA-HE system



OPCPA-HE output spectrum



OPCPA-HE pulse energy, f-2f interferogram and CEP stability measured during a 16-hour test run



Temporal profile of OPCPA-HE output pulses measured with a self-referenced spectral interferometry device