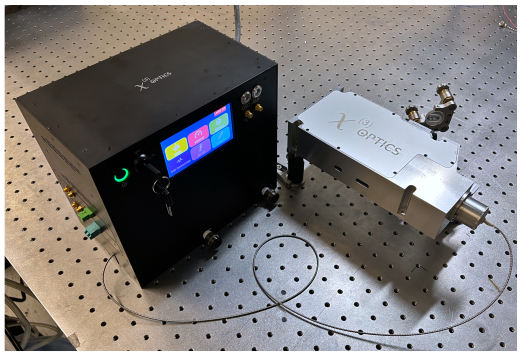
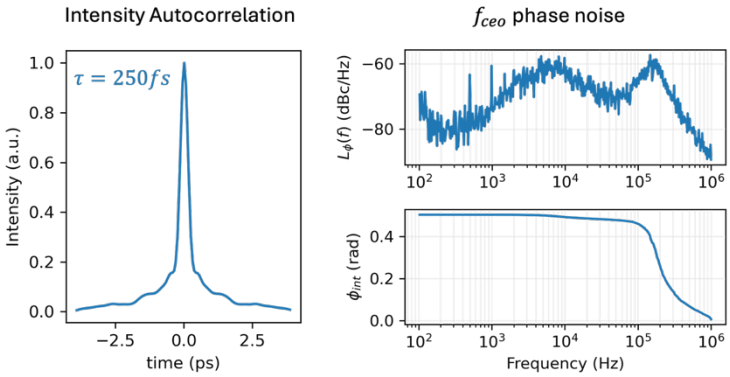
1880 S Flatiron Ct Suite F
Boulder, CO 80301
support@chi3optics.com

Sequoia

CEP-stable high power ultrafast laser





The Chi3 Sequoia is a CEP-stable high-power ultrafast laser, an amplified frequency comb capable of maintaining a constant carrier-envelope phase. This is the first system to demonstrate f_{ceo} locking and tuning across nearly the full free spectral range, starting from DC, with minimal variation in output power and pulse duration. The compact compressor module is designed to be movable and mounted separately, enabling delivery of high-power output directly to the point of application.

Specification	Performance
Repetition rate	80 MHz
Center wavelength	1550 nm
Spectral bandwidth	45 nm FWHM
Pulse duration	250 fs
Output power	3 W
Optical output	free space
Electronic output	SMA: f_ceo, pump current monitor
Electronic input	SMA: Fast, Slow PZT inputs
f_{rep} tuning range	14 kHz
f_{ceo} locking range	Full free spectral range
Dimensions	18 (L) x 14 (H) x 6 (W) cm^3
f_{ceo} phase noise (10 Hz to 10 MHz)	<850 mrad (out of loop), <550 mrad (in loop)
f_{opt} phase noise	<250 mrad (10 Hz to 10 MHz)
Manual control interface	Knob, (touchscreen, RS232 also available)