Cycle

SOPRANO-CA

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1550 nm Femtosecond Laser for Multiphoton imaging, material processing and more

APPLICATIONS

Femtosecond fibered light source for

- Material processing (e.g. Silica)
- Semiconductor testing (e.g. OBIC)
- Multiphoton microscopy
- Spectroscopy

BENEFITS

- 0.4 W average power
- 30 MHz repetition rate
- 14 nJ pulse energy at 1550 nm (typical)
- Pulse duration < 150 fs
- No water-cooling required
- Turn-key operation, 15 min warm-up time

DESCRIPTION

Cycle's **SOPRANO-CA** femtosecond laser delivers outstanding performance, acclaimed for its clean pulse shape and low relative intensity noise. This makes it exceptionally suitable for materials analysis, semiconductor testing, and more. Designed for continuous 24/7 operation without the need for water-cooling, the SOPRANO-CA merges advanced features with cost-effectiveness, making it an attractive option for both scientific and industrial settings.

Contact us at sales@cyclelasers.com to explore the SOPRANO series. Our engineers will help optimize parameters for your needs.

SPECIFICATIONS

Parameters	Value	Comment
Center wavelength	1560 +/- 15 nm	
Pulse duration	<150 fs	Typically <130 fs
Avg. output power	Up to 400 mW	
Pulse energy	14 nJ	
Pulse repetition rate	30 MHz	Higher repetition rates possible
Spectral bandwidth	>25 nm	
Beam quality	M^2 < 1.1, TEM_{00}	
PER	>20 dB	
Laser output	collimated free space	
Output beam diameter	1 mm	Other beam sizes possible
Electrical		
Power supply	100 – 240VAC, 50 – 60Hz	

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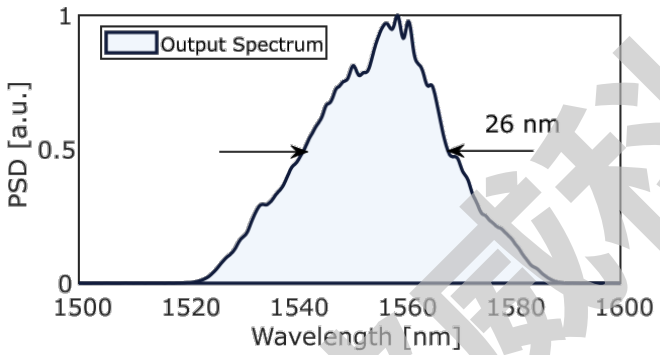
Our team of experienced laser engineers will find a useful combination of parameters which will best fit your needs and application.

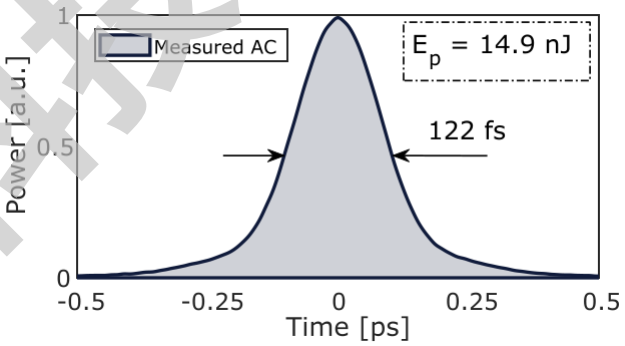
MEASUREMENT DATA

The laser output measurement for the Soprano-CA prototype, which has an average output power of 420 mW, is provided for reference purposes.

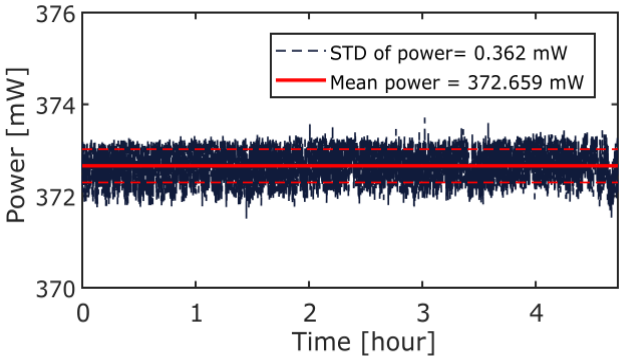
OPTICAL SPECTRUM



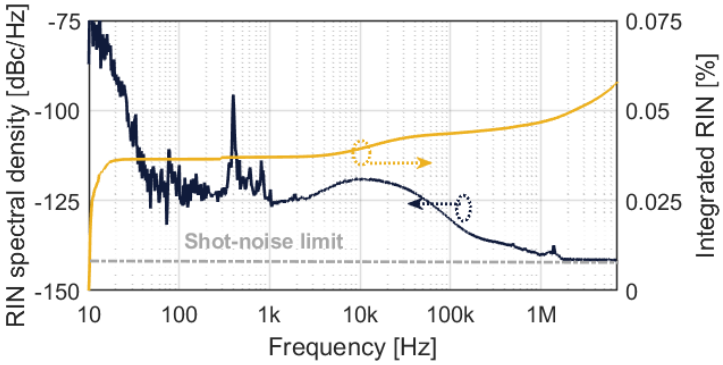
PULSE DURATION

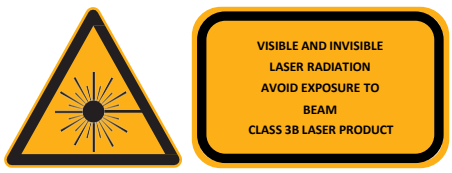


POWER STABILITY



RELATIVE INTENSITY NOISE





Cycle SOPRANO is a Class 3B Laser Product