

SOPRANO-15 Mini

Femtosecond Lasers for Materials Processing and more



This femtosecond laser by Cycle is an ideal light source for various tasks in materials analysis and processing, semiconductor testing and more. With a center wavelength of 1550 nm and typically below 130fs pulse durations, many applications can benefit from this state-of-the-art ultrafast laser.

SOPRANO is designed to deliver reliable 24/7 operation in industrial as well as scientific environments without requirements for water-cooling. It was developed in close cooperation with scientific experts to provide a unique light source with the best features of complex laser systems at an affordable price.

Please feel free to discuss also your other laser needs with us. Our team of experienced laser engineers will find a useful combination of parameters which will best fit your application.

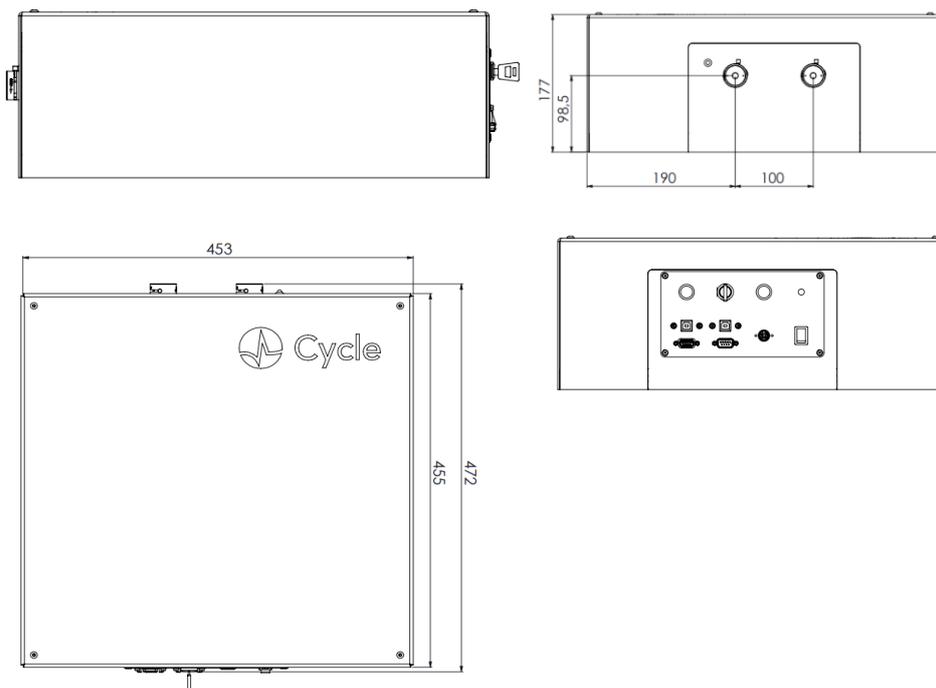
KEY SPECIFICATIONS

- Average power 200 mW
- Pulse Energy 6.6 nJ at 1550nm
- Repetition rate 30 MHz
- Pulse duration below 1300 fs typical

APPLICATIONS

- Material Processing e.g. Silica
- Multiphoton microscopy
- Spectroscopy
- Semiconductor Testing (e. g. OBIC)

Parameters	Laser	Comment
Center wavelength	1550 nm	
Pulse Duration	<130 fs	Typical
Avg. output power	>200 mW	
Pulse energy	6.6 nJ	
Peak power	45 kW	
Pulse repetition rate	30 MHz	higher rep rates possible
Spectral bandwidth	~60nm	Transform-limited
Beam quality	$M^2 < 1.2$, TEM ₀₀	
PER	> 20 dB	
Laser output	collimated free space	Beam height 98.5 mm
Mechanical		
Size laser head (L x W x H)	453 x 455 x 177 mm ³	
Weight laser head	ca. 15 kg	
Electrical		
Power supply	100 – 240 VAC, 50 – 60 Hz	
Power consumption	< 50 W	



Cycle SOPRANO is a Class 4 Laser Product