

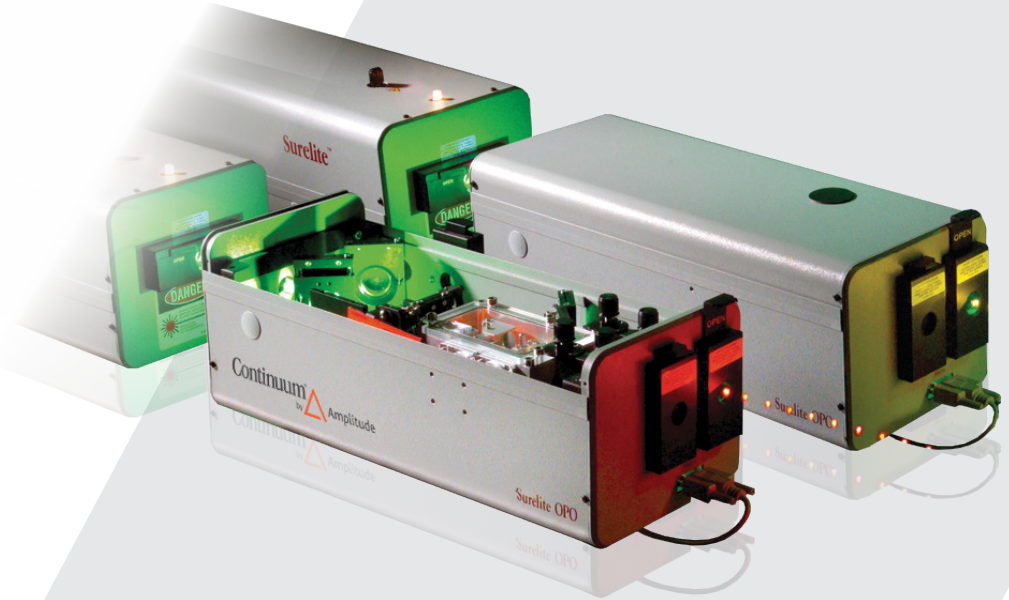
# Surelite™ OPO Plus

## Versatile Tunable Systems

The ultimate design goal for the Surelite OPO Plus system was to provide broad solid state tunability, ease of operation, and efficiency. Having all of that combined with good beam quality, is what sets the Amplitude Surelite OPO apart.

Our extensive OPO experience has given Amplitude a unique advantage in understanding the pump beam characteristics required for successful OPO performance. The SLOPO Plus can be pumped with our standard Surelite lasers, but more recently Amplitude introduced the Surelite EX - a designated OPO pump source.

This Type I BBO broadband OPO boasts several unique features. A double pass optical cavity design takes advantage of the pump polarization and resonant wave for efficient optical parametric oscillation, and a fully hermetically sealed oscillator ensures crystal longevity. One inclusive mirror set gives complete access to the signal and idler tuning range and optional computer control means truly hands free operation.



### Applications

#### Science:

- > Photoacoustic Imaging
- > Biological Sample Excitation
- > Spectroscopy
- > Diode Laser Simulation
- > Two-color Particle Image Velocimetry

### Key Features

- > Designated OPO pump lasers to enhance performance and offer a complete system solution
- > Single resonant cavity for excellent beam quality
- > Hermetically sealed oscillator to ensure crystal longevity
- > IRO option for simultaneous access to residual frequencies to allow for secondary experiments, and built-in safety Interlocks for smooth and safe operation in every lab
- > OPO in 532 nm or 355 nm configuration to provide wavelength of interest

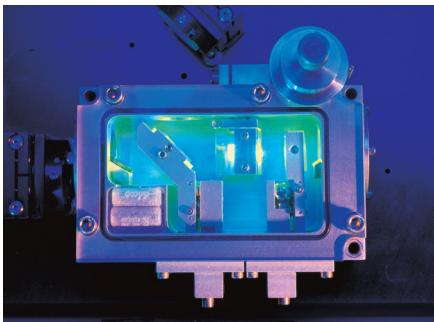
# Specifications

## 532 nm Pump Source

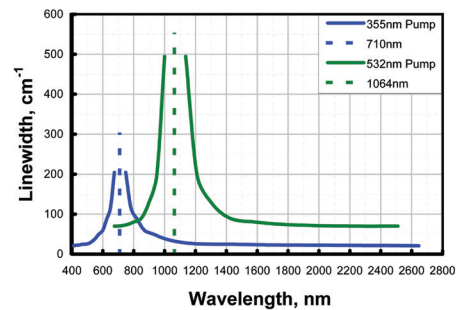
	SL I-10	SL I-20	SL II-10	SL III-10	SL EX
Pump Energy (mJ)	200	160	300	400	375
Energy at Peak (mJ)	65	50	95	120	135
Repetition Rate (Hz)	10	20		10	
Tuning Range (nm)	680 - 2500				
Signal & Idler Pulsewidth (nsec)	3-5				

## 355 nm Pump Source

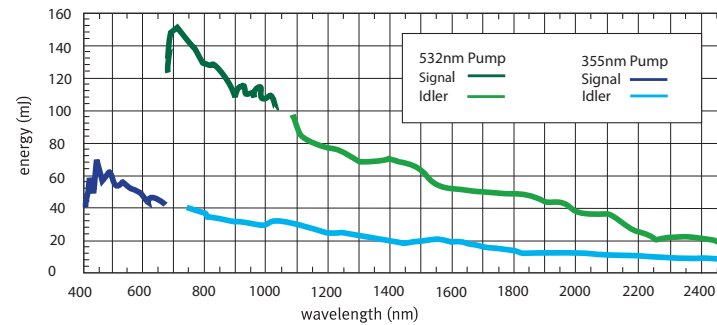
	SL I-10	SL I-20	SL II-10	SL III-10
Pump Energy (mJ)	100		160	200
Energy at Peak (mJ)	35		55	70
Repetition Rate (Hz)	10	20		10
Tuning Range (nm)	410-2500			
Signal & Idler Pulsewidth (nsec)	3-5			



Surelite OPO Plus Sealed Oscillator



Surelite OPO Plus - Linewidth Curve  
Pump: SLII-10, 300 mJ at 532 nm, 160 mJ at 355 nm

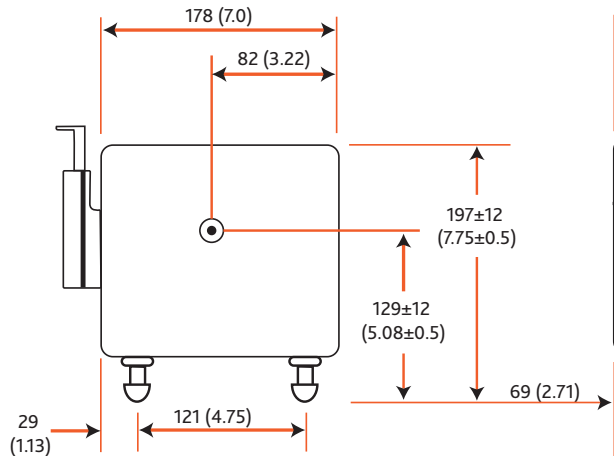


Surelite OPO Plus - Typical Data  
Pump: SL EX, 375 mJ at 532 nm & SL II-10, 160 mJ at 355 nm

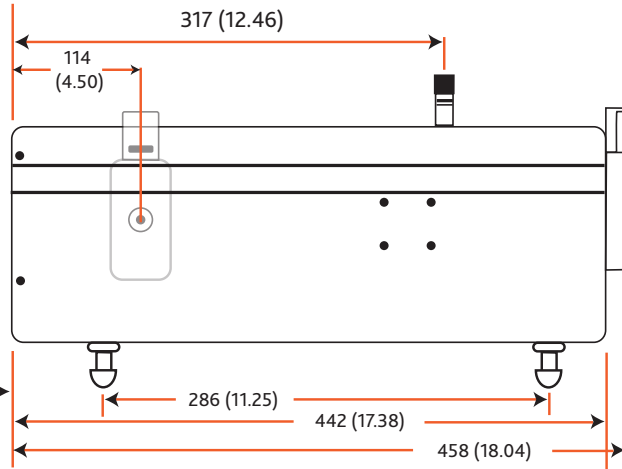
# Surelite OPO Plus Physical Layout

All dimensions are in mm (inches).

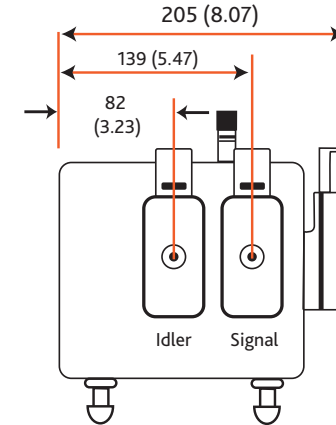
Input View



Side View



Output View



## PC Control Option



The PC Control option gives full control of all scanning features via a simple Windows® platform.

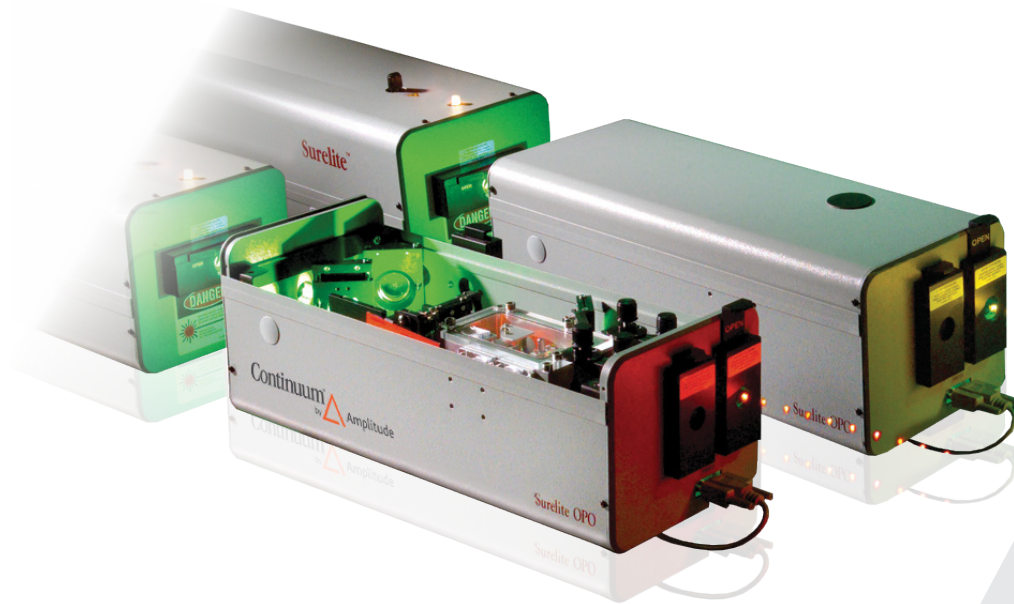
Input your wavelength and scan range of choice, select the scan speed and the SLOPO computer control will ensure optimal performance every time. This option also provides a link between both laser and lab instrumentation - an essential feature for system automation and/or data collection.

The standard SLOPO comes with a micrometer for manual control giving easy access to the broad OPO tuning range.



# Surelite™ OPO Plus

*Versatile Tunable Systems*



Continuum<sup>®</sup> by  Amplitude