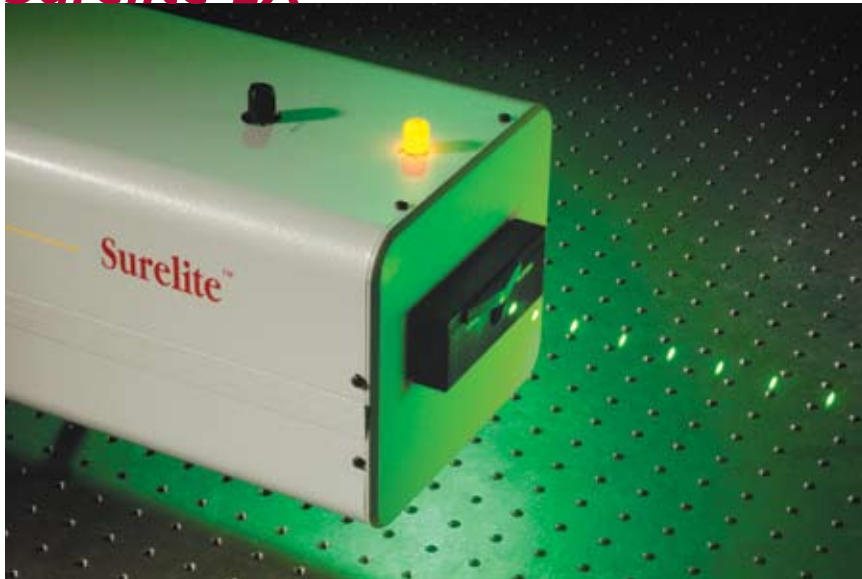


# Surelite™ EX



High Energy Nd:YAG  
High Energy Nd:YAG  
High Energy Nd:YAG  
High Energy Nd:YAG

*RS-232 or TTL interface for remote or local operation*

*Water to air heat exchanger eliminates the need for external water cooling*

*Gaussian optics incorporated to provide low divergence and high spatial uniformity in beam*

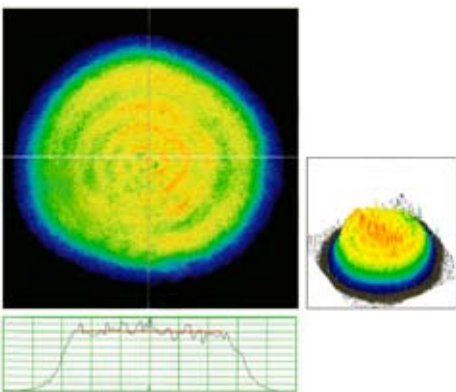
*Graphite resonator structure ensures long-term thermal and mechanical stability*

## Surelite EX

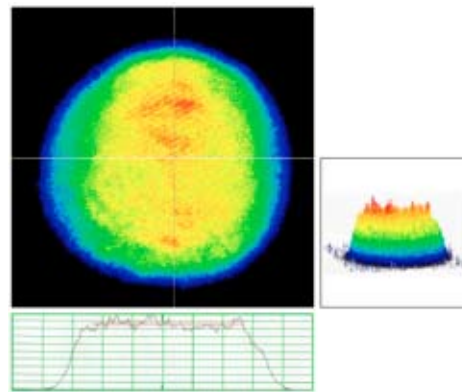
Surelite EX is designed to be the ultimate pump source for OPOs and Ti:Sapphire systems.

With an optimized laser cavity, Surelite EX provides a uniform distribution of energy across the beam profile while minimizing hot spots and modulation. This optimal beam quality allows for maximum energy conversion in OPOs and Ti:Sapphire systems making Surelite EX the ideal choice for these applications.

To satisfy the most stringent requirements, Continuum offers a seeded version of the Surelite EX producing smoother repeatable temporal pulse shape and much narrower linewidth for better conversion efficiency in OPOs.



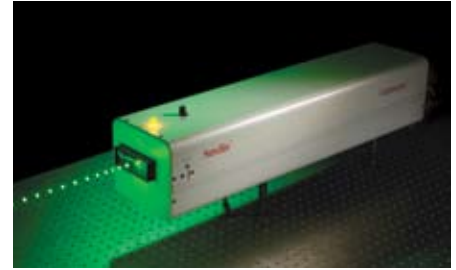
Beam Profile -  
Seeded Surelite EX



Beam Profile -  
Unseeded Surelite EX

# Surelite EX Specifications

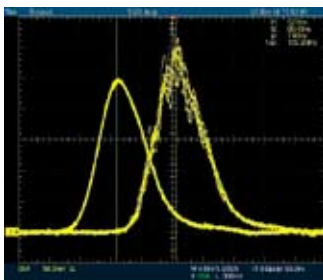
| Description                        | Seeded  | Unseeded |
|------------------------------------|---------|----------|
| Repetition Rate (Hz)               | 10      | 10       |
| Energy (mJ)                        |         |          |
| 1064 nm                            | 625     | 700      |
| 532 <sup>1</sup> nm                | 300     | 375      |
| 355 <sup>2</sup> nm                | 120/180 | 125/220  |
| 266 nm                             | 70      | 90       |
| Pulsewidth <sup>3</sup> (nsec)     |         |          |
| 1064 nm                            | 4-6     | 4-6      |
| 532 nm                             | 3-5     | 3-5      |
| 355 nm                             | 3-5     | 3-5      |
| 266 nm                             | 3-5     | 3-5      |
| Linewidth (cm <sup>-1</sup> )      | 0.005   | 1        |
| Divergence <sup>4</sup> (mrad)     | 0.5     | 0.5      |
| Beam Pointing Stability (±μrad)    | 50      | 50       |
| Beam Diameter (mm)                 | 9.5     | 9.5      |
| Jitter <sup>5</sup> (±ns)          | 1       | 0.5      |
| Energy Stability <sup>6</sup> (±%) |         |          |
| 1064 nm                            | 2.5;0.8 | 2.5;0.8  |
| 532 nm                             | 3.5;1.2 | 3.5;1.2  |
| 355 nm                             | 4.0;1.3 | 4.0;1.3  |
| 266 nm                             | 7.0;2.3 | 7.0;2.3  |
| Power Drift <sup>7</sup> (±%)      |         |          |
| 1064 nm                            | 3.0     | 3.0      |
| 532 nm                             | 6.0     | 5.0      |
| 355 nm                             | 6.0     | 5.0      |
| 266 nm                             | 8.0     | 8.0      |



## Notes

1. Using Type II doubler
2. High energy UV option with Type I doubler
3. FWHM full width half max
4. Full angle for 86% (1/e<sup>2</sup>)
5. With respect to external trigger
6. The first value represents shot-to-shot for 99.9% of pulses, the second value represents RMS
7. Average for 8 hours with ΔT±3°C

All specifications at 1064 nm unless otherwise noted.  
As a part of our continuous improvement program, all specifications are subject to change without notice.



Temporal Profile -  
Seeded vs. Unseeded

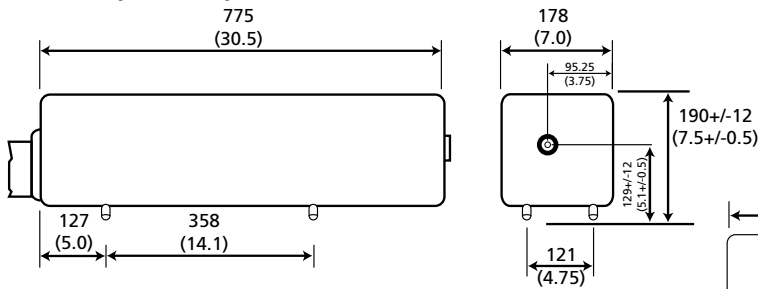


Injection Seeder Configuration

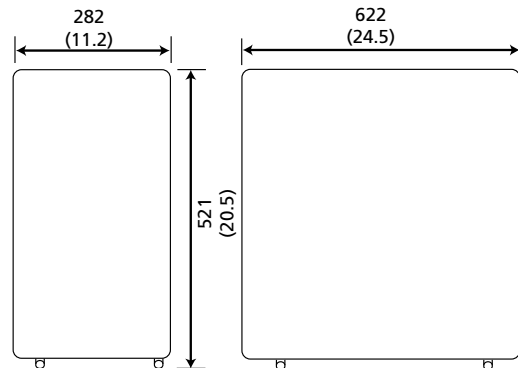
# Surelite EX System Requirements

|                    |                       |   |
|--------------------|-----------------------|---|
| Size               | Optical Head (LxWxH)  | 775 x 178 x 190 mm (30.5 x 7.0 x 7.5")  |
|                    | Power Supply (LxWxH)  | 622 x 282 x 508 mm (24.5" x 11.2" x 20.0")  |
|                    | Seeder Supply (LxWxH) | 257 x 421 x 41 mm (10.1" x 16.6" x 1.6")  |
| Weight             | Optical Head          | 24 kg (52 lbs)  |
|                    | Power Supply          | 44 kg (96 lbs)  |
|                    | Seeder Supply         | 4.5 kg (10 lbs)   |
| Water              |                       | closed loop water to air heat exchanger (1 gallon deionized water); external cooling water not required |
| Electrical Service |                       | 208 - 240 VAC, single $\phi$ , 10 A   |
|                    |                       | 208 V, single $\phi$ , 10 A   |
| Room Temperature   |                       | 18 to 30° C / 65 to 87° F   |
| Umbilical Length   |                       | 3.18 m (10.4 ft)  |

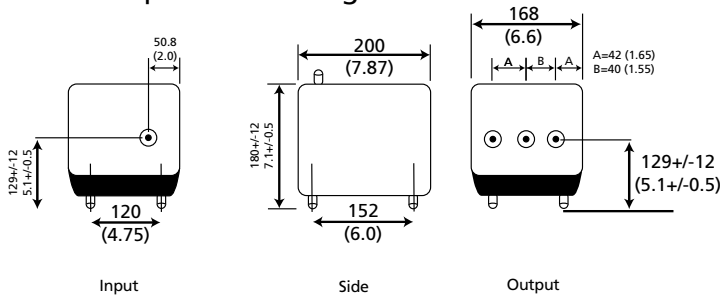
## Surelite EX Physical Layout All dimensions are in mm (inches)



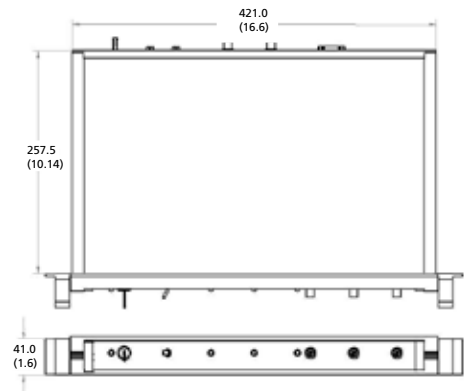
## Surelite Power Supply



## Surelite Separation Package



## Seeder Physical Layout



Continuum  
 3150 Central Expressway, Santa Clara, CA  
 Tel (408) 727-3240 Fax (408) 727-8237  
 USA Sales (866) 532-1064  
[www.continuumlasers.com](http://www.continuumlasers.com)

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