High Energy Nd:YAG
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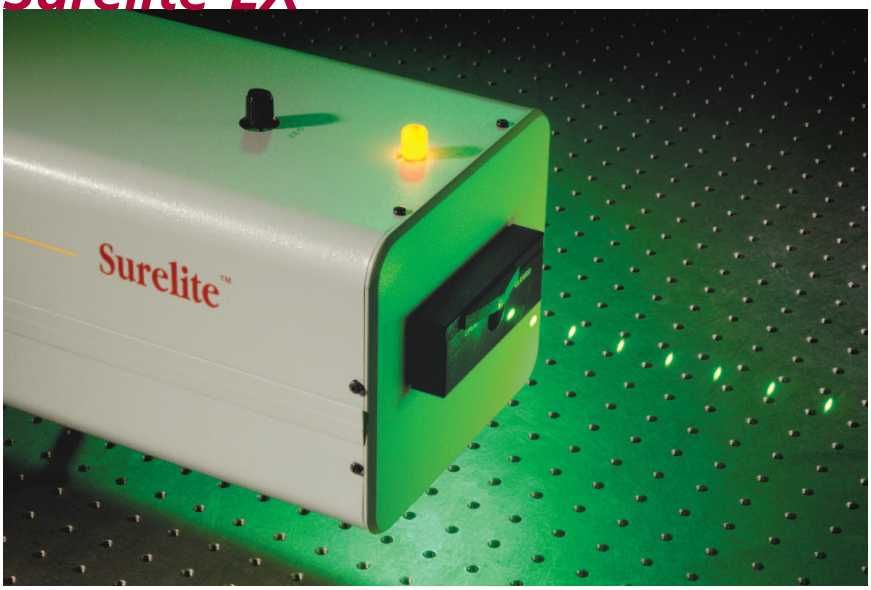
Surelite™ EX



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 requriements, 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.

RS-232 or TTL interface for remote or local operation

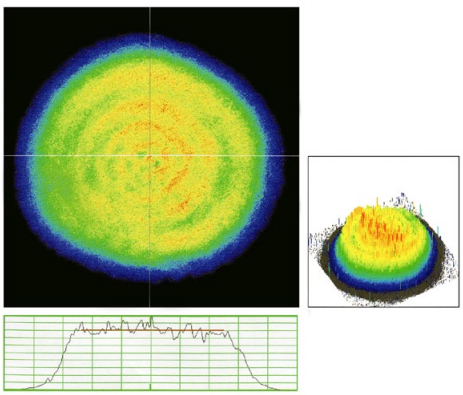
Water to air heat exchanger eliminates the need for external water cooling

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

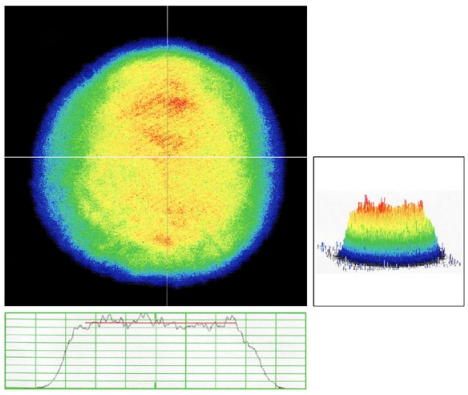
Graphite resonator structure ensures long-term thermal and mechanical stability

NEW

213 nm option available



Beam Profile -
Seeded Surelite EX



Beam Profile -
Unseeded Surelite EX

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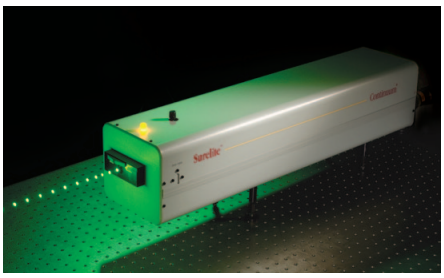
Surelite EX Specifications

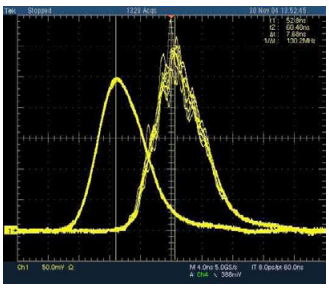
Description	Seeded	Unseeded
Repetition Rate (Hz)	10	10
Energy (mJ)		
1064 nm	625	700
532[1] nm	300	375
355[2] nm	120/180	125/220
266 nm	70	90
Pulsewidth[3] (nsec)		
1064 nm	4-6	4-6
532 nm	3-5	3-5
355 nm	3-5	3-5
266 nm	3-5	3-5
Linewidth (cm^{-1})	0.005	1
Divergence[4] (mrad)	0.5	0.5
Beam Pointing Stability (±µrad)	50	50
Beam Diameter (mm)	9.5	9.5
Jitter[5] (±ns)	1	0.5
Energy Stability[6] (±%)		
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[7] (±%)		
1064 nm	3.0	3.0
532 nm	6.0	5.0
355 nm	6.0	5.0
266 nm	8.0	8.0



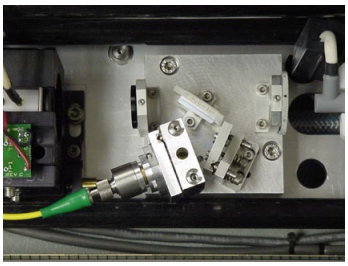
Notes

1. Using Type II doubler
2. First # with Type II doubler / Second # with Type I doubler
3. FWHM full width half max
4. Full angle for 86% ($1/e^2$)
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

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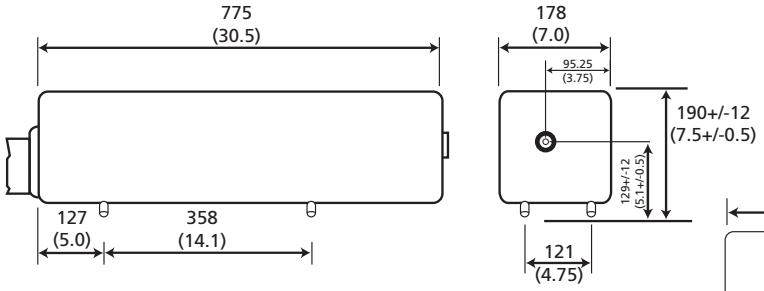
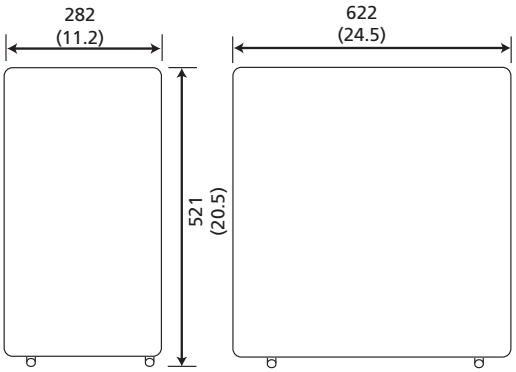
Surelite EX System Requirements

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		200 - 240 VAC, single ϕ, 10 A, 50/60 Hz
Room Temperature		18 to 30° C / 65 to 87° F
Umbilical Length		3.18 m (10.4 ft)

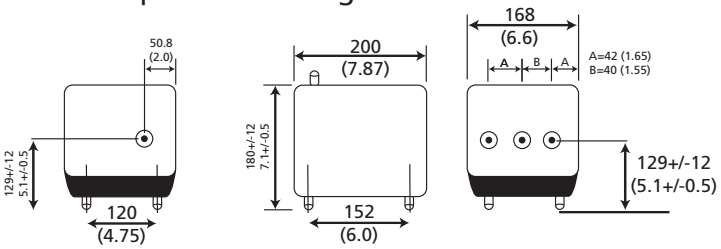
Surelite EX Physical Layout All dimensions are in mm (inches)



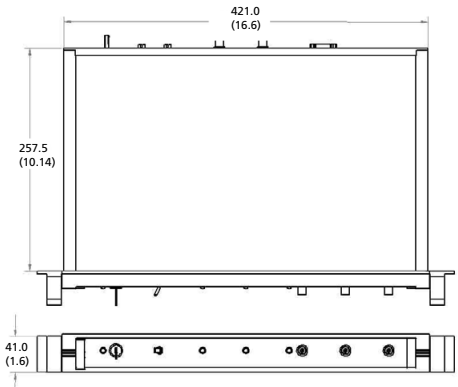
Surelite Power Supply



Surelite Separation Package



Seeder Physical Layout



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