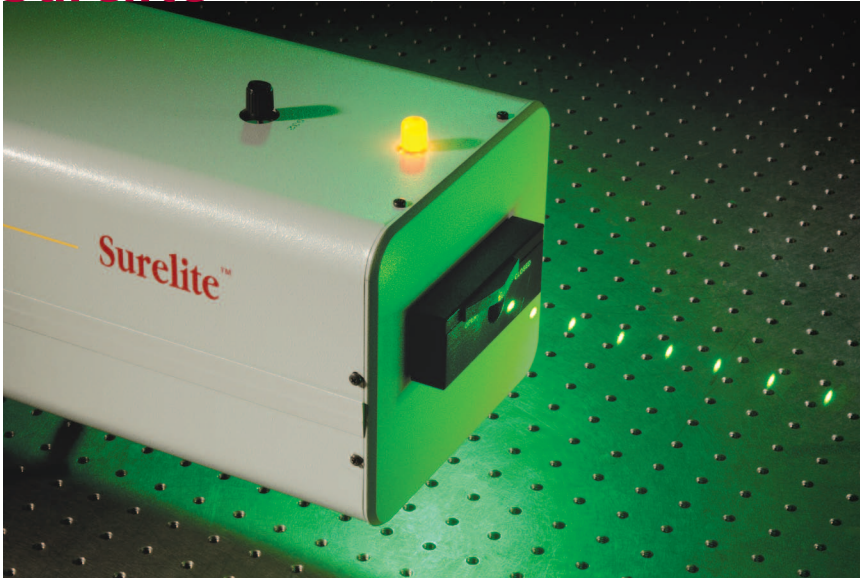


Surelite™



Surelite

Surelite is the most imitated Nd:YAG laser design in the industry. Surelite lasers provide proven high performance and reliability at a very reasonable price. Over 3,000 Surelites are in operation throughout the world today in Scientific, Industrial and Medical applications. Surelites are being used for remote sensing, spectroscopic analysis, Particle Image Velocimetry (PIV), machining, marking, and biological investigations. Excellent beam quality and unsurpassed output energies make Surelite the perfect choice for pumping OPOs, dye lasers and Ti:sapphire lasers.

The Surelite I, II and III all feature a simple and efficient single rod oscillator design. The Gaussian mirror-coupled resonator is optimally mode filled for maximum energy extraction. A unique rod design, proprietary Q-switch technology and Continuum's diffuse reflector technology all contribute to the Surelite's efficiency and high performance.

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 Specifications

Description	SL I-10	SL I-20	SL I-30	SL II-10	SL II-20	SL III-10
Repetition Rate (Hz)	10	20	30	10	20	10
Energy (mJ)						
1064 nm	450	420	380	650	550	850
532 ¹ nm	200	160	130	300	250	425
355 nm	65/100 ²	60/100 ²	25/70 ²	100/160 ²	70/120 ²	165/225 ²
266 nm	60	45	30	80	60	100
Pulsewidth³ (nsec)						
1064 nm	5-7	5-7	5-7	5-7	5-7	4-6
532 nm	4-6	4-6	4-6	4-6	4-6	3-5
355 nm	4-6	4-6	4-6	4-6	4-6	3-5
266 nm	4-6	4-6	4-6	4-6	4-6	3-5
Linewidth (cm⁻¹)						
Standard	1	1	1	1	1	1
Divergence ⁴ (mrad)	0.5	0.5	0.5	0.5	0.5	0.5
Beam Pointing Stability (±μrad)	30	50	70	30	50	50
Beam Diameter (mm)	6	6	6	7	7	9.5
Jitter ⁵ (±ns)	0.5	0.5	0.5	0.5	0.5	0.5
Energy Stability⁶ (±%)						
1064 nm	2.0;0.7	2.0;0.7	2.0;0.7	2.5;0.8	2.5;0.8	2.5;0.8
532 nm	3.5;1.2	3.5;1.2	3.5;1.2	3.5;1.2	3.5;1.2	3.5;1.2
355 nm	4.0;1.3	4.0;1.3	4.0;1.3	4.0;1.3	4.0;1.3	4.0;1.3
266 nm	7.0;2.3	7.0;2.3	7.0;2.3	7.0;2.3	7.0;2.3	7.0;2.3
Power Drift⁷ (±%)						
1064 nm	3.0	3.0	3.0	3.0	3.0	3.0
532 nm	3.0	3.0	3.0	6.0	6.0	5.0
355 nm	3.0	3.0	3.0	6.0	6.0	5.0
266 nm	6.0	6.0	6.0	8.0	8.0	8.0
Beam Spatial Profile⁸						
Near Field (<1M)	0.70	0.70	0.65	0.70	0.65	0.70
Far Field (∞)	0.95	0.95	0.90	0.95	0.90	0.95
Deviation from Gaussian⁹						
Near Field (<1M)	30	30	35	30	35	30
Polarization						
1064, 355, 266 nm	----- Horizontal -----					
532 nm	----- Vertical -----					

Notes

1. With Type II doubler
2. High Energy UV option with Type I doubler
3. Full width, half maximum
4. Full angle for 86% of energy
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 $\Delta T_{room} < \pm 3$ °C
8. A least squares fit to a Gaussian profile. A perfect fit would have a coefficient of 1
9. Maximum deviation at beam center (±%)

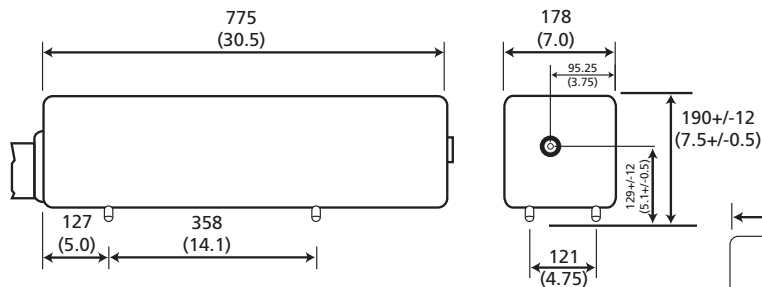
All specifications at 1064 nm unless otherwise noted.

As a part of our continuous improvement program, all specifications are subject to change without notice.

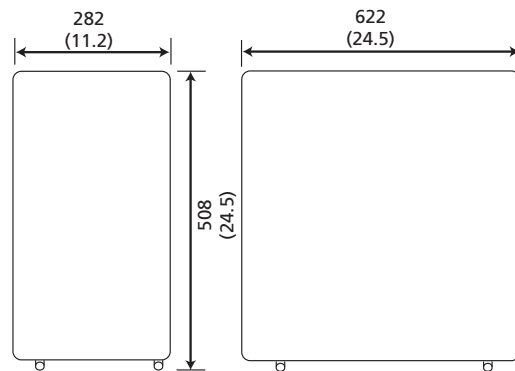
Surelite System Requirements

Size	Optical Head (LxWxH)	775 x 178 x 190 mm (30.5 x 7.0 x 7.5")
	Optical Head, OEM version	635 x 178 x 190 mm (25" x 7.0" x 7.5")
	Power Supply (LxWxH)	622 x 282 x 508 mm (24.5" x 11.2" x 20.0")
Weight	Optical Head	24 kg (52 lbs)
	Optical Head, OEM version	16 kg (36 lbs)
	Power Supply	44 kg (96 lbs)
Water		closed loop water to air heat exchanger: external cooling water not required (1 gallon deionized water)
Electrical Service		208 - 240 VAC, single ϕ , 10 A
		208 V, single ϕ , 10 A
Room Temperature		18 to 30° C / 65 to 87° F
Umbilical Length		3.18 m (10.4 ft)

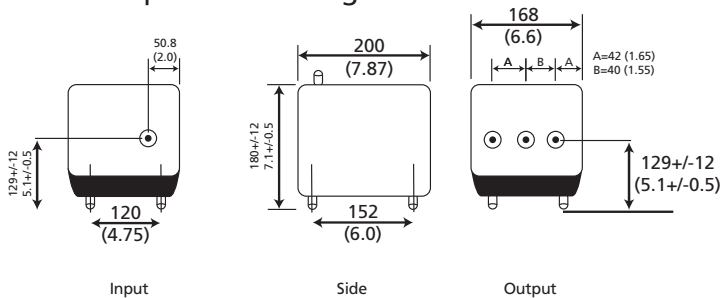
Surelite Physical Layout All dimensions are in mm (inches)



Surelite Power Supply



Surelite Separation Package



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992-0012, Rev. J 05/14

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