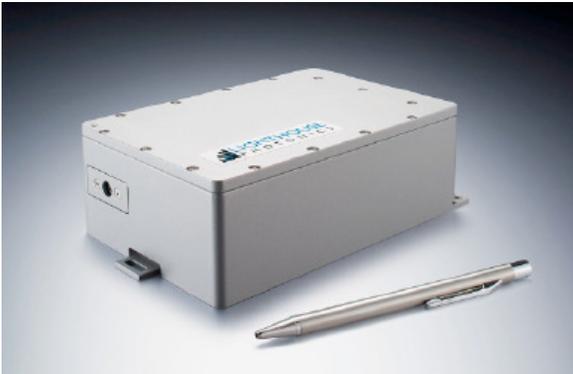




## High Power CW 532 nm DPSS Lasers Sprout-C Series



### Features

- Compact laser head with Seal™ enclosure for long lifetime
- LockT™ optics mounting for permanent laser head alignment
- Long lifetime pump diode integrated inside laser head
- Excellent long-term power stability <0.5% rms over 24 hours
- Bench-top, compact power supply with touch-screen control
- Disconnectable, 3 meter long control cable
- 3W and 4 W versions

### Applications

- Pumping Ti:Sapphire lasers:  
ultrafast & continuous-wave
- Flow visualization, PIV
- Ophthalmology
- Flow cytometry
- Spectroscopy

### Patented

Sprout-C™ is a compact, diode-pumped solid-state (DPSS) laser providing mid-power, continuous-wave (CW) power at 532nm in a near-perfect TEM<sub>00</sub> mode with extremely low optical noise and excellent long-term stability. Sprout™ is truly a next-generation laser designed and manufactured using many years of experience to provide a sealed, turn-key source of collimated green light with high spectral purity.

A number of key technologies enable Sprout™ to guarantee this performance. Seal™ technology keeps all dirt, dust and moisture out of the laser head to provide years of uninterrupted usage without need for cleaning or maintenance. LockT™ technology locks all laser head optics permanently in perfect alignment.

The laser head is a monolithic 3-dimensional design for ruggedness and compactness to minimize the space consumed in your lab or instrument. The pump diode, integrated inside the laser head, has a typical mean time to failure (MTTF) of more than 20,000 hours to minimize cost-of-ownership. Locating the pump diode in the laser head rather than the power supply eliminates the fiber optic delivery cable.

A 3 meter long, flexible, disconnectable control cable connects the laser head to a compact power supply with touch-screen control. The power supply can sit next to the laser head or on an overhead shelf. Additional system features include automatic laser power control and both USB and RS-232 interfaces for external monitoring, control and remote service.

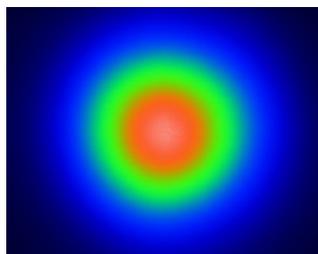
Sprout™ is a state-of-the-art laser designed for today's integrated solutions. It combines superb performance and tremendous value for today's market.



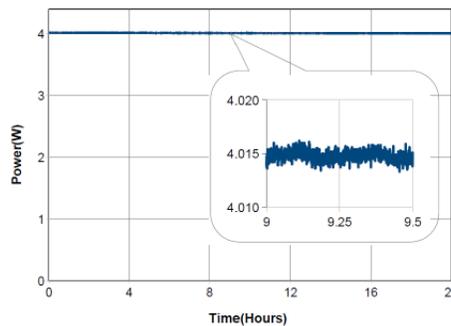
Laser Output Characteristics <sup>1,9</sup>	C-3W	C-4W
Average Output Power	> 3 W	> 4 W
Wavelength	532 nm	
Spectral Purity <sup>2</sup>	> 99.9 %	
Spatial Mode	TEM <sub>00</sub>	
Beam Quality (M <sup>2</sup> )	1.0 - 1.1	
Beam Ellipticity	< 1.0 : 1.1	
Beam Diameter <sup>3</sup>	2.2 mm ± 10%	
Beam Divergence <sup>4</sup>	< 0.5 mrad	
Pointing Stability <sup>5</sup>	< 2 μrad/°C	
Power Stability <sup>6</sup>	< ± 0.25 % rms	
Noise <sup>7</sup>	< 0.2 % rms	
Polarization	> 100:1 vertical Horizontal polarization option available	
Power Requirements		
Operating Voltage	100-240 VAC, 50 Hz / 60 Hz	
Power Consumption	200 W max, 150 W typical	
Cooling Requirements		
Laser Head <sup>8</sup>	100 W heat removal capacity, water temperature 23°C ± 1°C	
Power Supply	Air-cooled	
Environmental Specifications		
Operating Temperature	64-90°F (18-32°C)	
Relative Humidity	8-85%, non-condensing	
Laser Head - Physical		
Dimensions (Height x Width x Length)	2.3 x 4.4 x 6.5 inches (59 x 110 x 165 mm)	
Weight	4.4 lbs (2.0 kg)	
Cable Length	10 ft (3 m) 16 ft (5 m) option available	
Power Supply - Physical		
Dimensions (Height x Width x Depth)	4.7 x 13.9 x 14.1 inches (119 x 353 x 360 mm)	
Weight	20.0 lbs (9.1 kg)	

Notes:

1. All performance specifications are guaranteed at specified power
2. Output power at 532 nm compared to output power at 1064 nm
3.  $1/e^2$ , measured at the output port of the laser head
4. Full angle ( $1/e^2$ ), measured at the output port of the laser head
5. Measured at far-field x and y positions after a 30 minute warm-up and over a 20°C to 30°C temperature range
6. Measured over a 24 hour period after a 15 minute warm-up
7. Measured from 10 Hz to 10 MHz
8. Assuming an environmental temperature for laser head of 25°C or less
9. Lighthouse Photonics is continually improving the performance of its products. Specifications subject to change without notice.

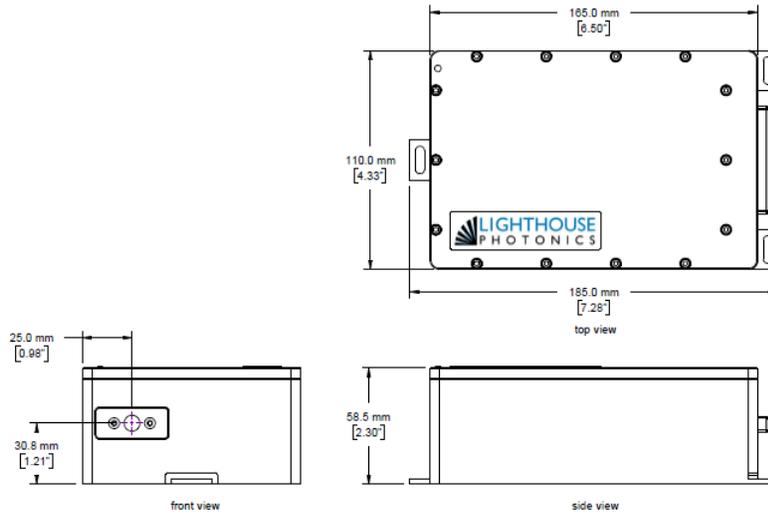


Typical Far-field beam profile

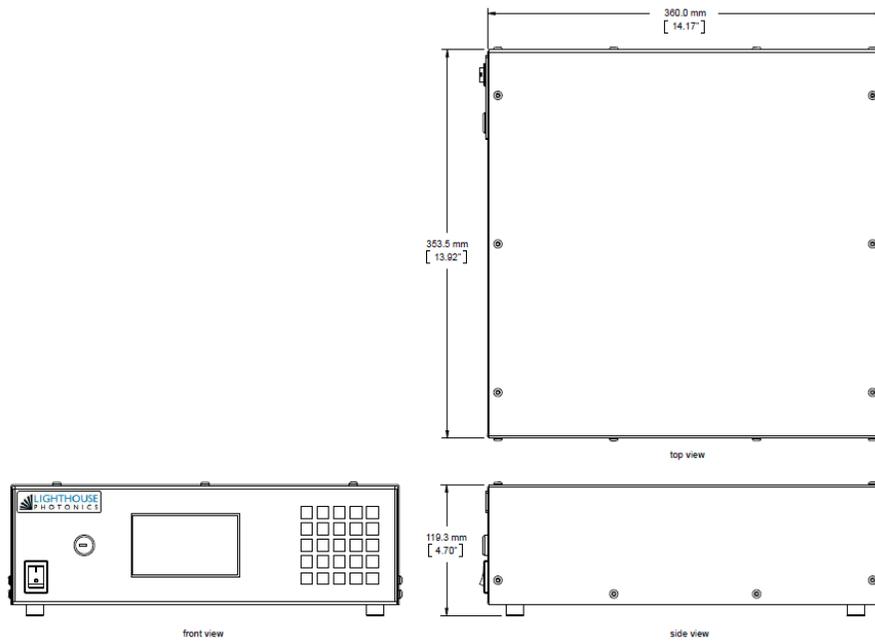


Power stability <0.1% rms  
over >20 hours

## Laser Head Dimensions



## Power Supply Dimensions



For more information go to: [www.lighthousephotonics.com](http://www.lighthousephotonics.com)

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