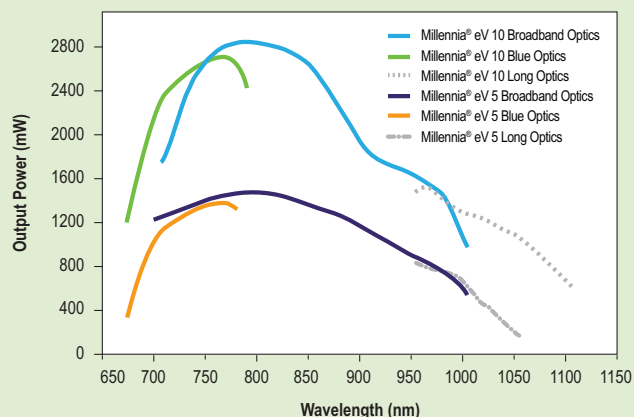


3900S CW Tunable Ti:Sapphire Laser



The Spectra-Physics Model 3900S is a high-performance, tunable, solid state IR laser. It delivers tunable, CW output from 675 to 1100 nm in a low-cost package. Pumped with either an argon ion laser or 532 nm diode-pumped solid state laser, the Model 3900S solid state Ti:Sapphire laser produces up to 3.5 W of TEM₀₀ output for the broadest range of IR applications.

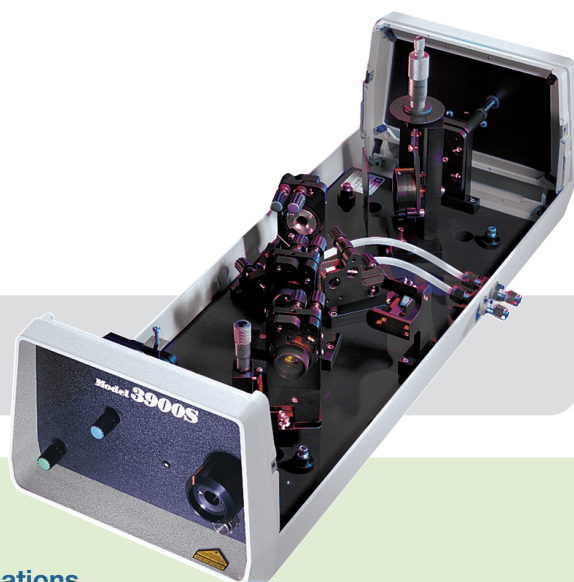
Typical Tuning Curve¹



1. Typically measured performance; not a guaranteed or warranted specification.

The 3900S Advantage

- Up to 3.5 W TEM₀₀ output power
- Tunable from 675 to 1100 nm
- Computer-optimized easy alignment
- Narrow linewidth option available



Applications

- Spectroscopy
- Fiber laser research
- Semiconductor studies
- Telecommunications research

3900S Specifications^{1, 9}

Average Power ²	675 nm ⁶	700 nm	790 nm	1000 nm	1050 nm ⁷
Millennia eV 15 W	1.5 W	1.8 W	3.0 W	1.2 W	1.0 W
Millennia eV 10 W	800 mW	1.2 W	2.2 W	500 mW	500 mW
Millennia eV 5 W	N/A	600 mW	1.0 W	250 mW	N/A
Tuning Ranges					
Broadband Optics	700–1000 nm				
Optional X-Long Optics	950–1100 nm				
Optional Blue Optics	675–750 nm				
Linewidth Specifications					
Standard 3900S	<40 GHz				
With Thin Etalon	<15 GHz				
With Thin/Thick Etalon	<1 GHz				
Stability					
Noise ³	<1%				
Power Drift ⁴	<3%				
Beam Characteristics					
Spatial Mode	TEM ₀₀				
Polarization	>100:1 Horizontal				
Beam Diameter (1/e ²) ⁵	0.95 mm				
Beam Divergence, full angle ⁵	<1 mrad				

1. Due to our continuous product improvement program, specifications may change without notice. Specifications only apply when the 3900S is pumped by a Spectra-Physics Millennia eV 15 W, 10 W or 5 W pump laser.

2. Power specified using the appropriate pump laser.

3. RMS, measured in a 10 Hz to 1 MHz bandwidth.

4. For a 2-hour period after a 1 hour warm up and $\pm 3^\circ\text{C}$ temperature change.

5. Specifications apply to operations at the peak wavelength.

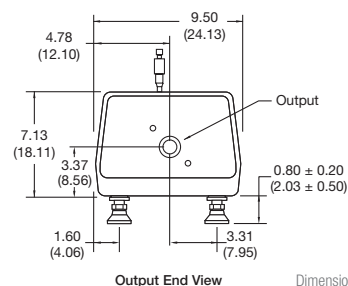
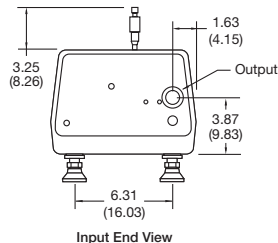
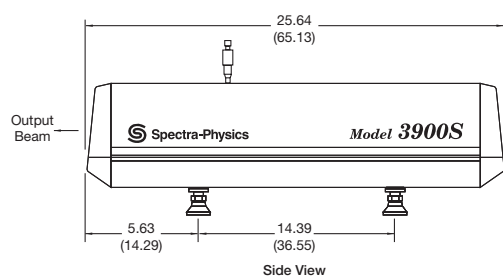
6. Using additional blue optics.

7. Using additional x-long optics.

8. Contact factory for additional pump powers.

9. The 3900S is a Class IV – High Power Laser, whose beam is, by definition, a safety and fire hazard. Take precautions to prevent exposure to the direct and reflected beams. Diffuse as well as specular reflections can cause severe skin or eye damage.

3900S Dimensions



Dimensions in inch (mm)