

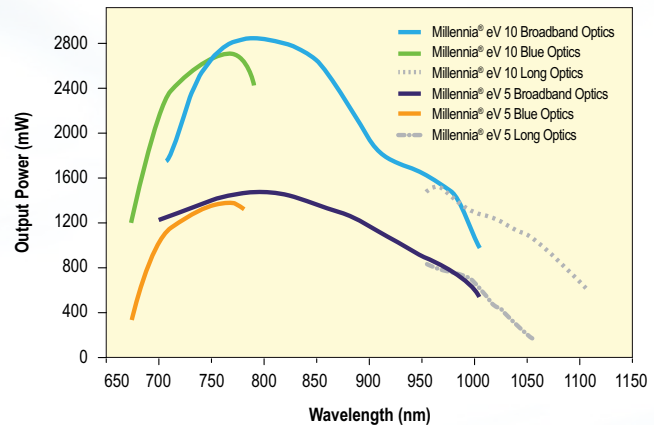
3900S CW Tunable Ti:Sapphire Laser

The 3900S Advantage

- Up to 3.5 W TEM_{00} output for high-power applications
- Tunable from 675 to 1100 nm
- Computer-optimized Z-fold cavity for maximum power and ease of alignment
- Etalon option available for narrow linewidth applications

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 TEM_{00} output for the broadest range of IR applications.

Typical Tuning Curve*



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

Applications

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

3900S CW Tunable Ti:Sapphire Laser

Specifications¹

Average Power ²	675 nm ⁶	700 nm	790 nm	1000 nm	1050 nm ⁷
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 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

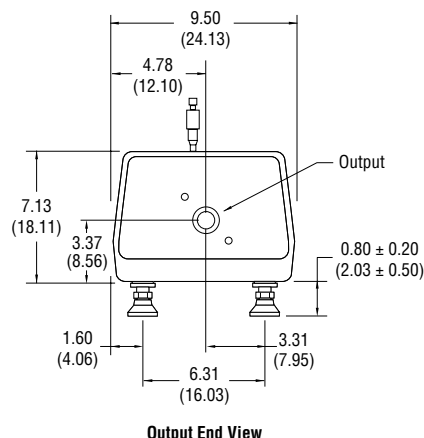
5. Specifications apply to operations at the peak wavelength

6. Using additional blue optics

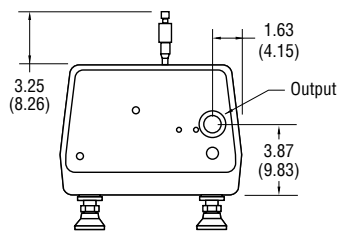
7. Using additional x-long optics

8. Contact factory for additional pump powers.

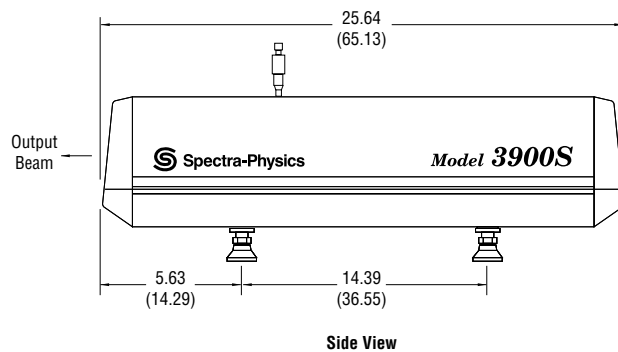
3900S Dimensions



Output End View



Input End View



Side View

Dimensions in inch (cm)



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