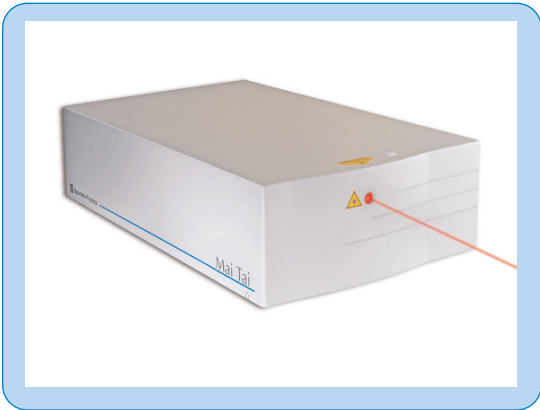


Mai Tai[®] SP

SHORT PULSE ULTRAFAST OSCILLATOR



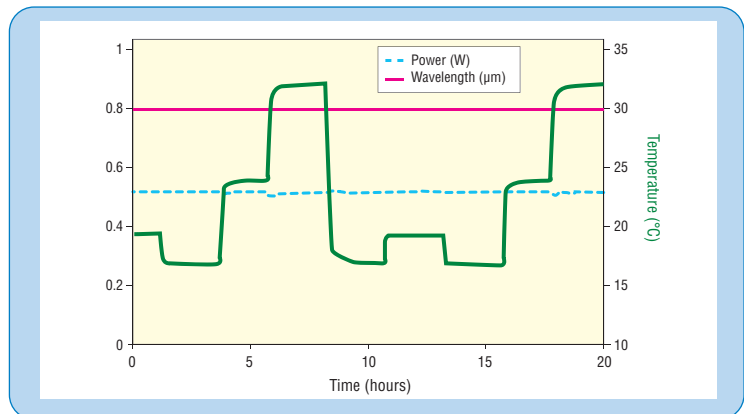
The Mai Tai SP Advantage

- Unsurpassed stability in $\pm 10^{\circ}\text{C}$ operating environment
- Fully automated for hands-free operation
- $< 10 \mu\text{rad}$ beam pointing
- Computer-controlled adjustable bandwidth (10–60 nm)
- $< 25 \text{ fs}$ pulse width capability
- Field-proven reliability

The Spectra-Physics[®] Mai Tai[®] SP Ti:Sapphire oscillator provides industry leading stability and cutting edge capability to the scientific research community. It is specifically designed as an amplifier seed for Spectra-Physics ultrafast amplifiers. The Mai Tai SP laser incorporates fully automated controls for bandwidth and center wavelength adjustment without the need for manual user intervention.

This unprecedented level of performance provides a stable, easily adjustable seed source for Spitfire Pro XP amplifier systems. Because of its flexibility, the same Mai Tai SP laser can be used to seed amplifiers in a variety of pulse width configurations (35 fs, 100 fs) to deliver true, transform-limited pulses.

The Mai Tai SP is equipped with StabiLok[®] active beam alignment technology and EternAlign[™] permanent optics mounts, to ensure outstanding stability and reliability. When operating under widely varying environmental conditions the Mai Tai SP maintains the average power, center wavelength, bandwidth, and beam pointing with best-in-class accuracy and precision. In addition, the laser is sealed so there is never a need to clean or realign the internal optics. The Mai Tai SP provides truly hands-free performance.



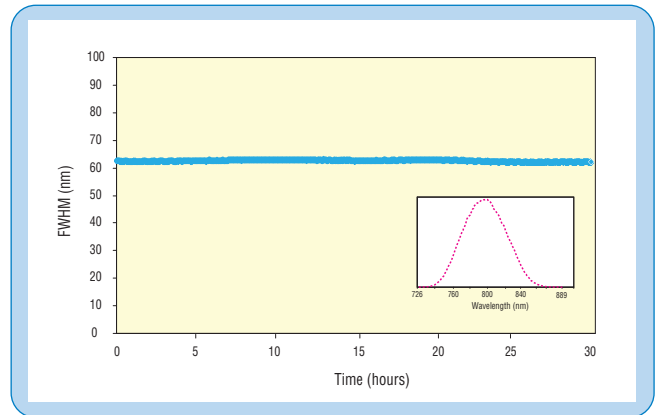
Mai Tai SP performance under $\pm 8^{\circ}\text{C}$ temperature swing. Performance values for average power ($\sim 0.5 \text{ W}$) and center wavelength stability ($< 0.3 \text{ nm}$) are shown.

Mai Tai[®] SP

Specifications¹

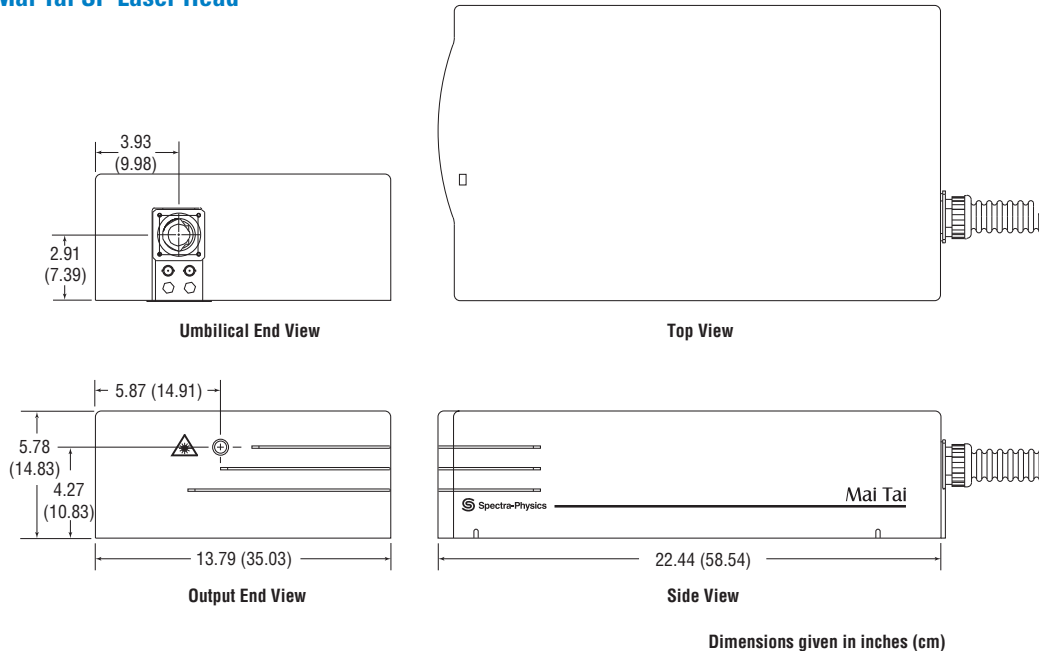
Average Power ²	>400 mW
Bandwidth ³	10–60 nm
Tuning Range	780–820 nm ⁴
Repetition Rate (nominal)	84 MHz
Noise ⁵	<0.5%
Stability ⁶	<±1%
Spatial Mode	TEM ₀₀
Beam Diameter (1/e ²)	1.5 mm
Beam Divergence, full angle	<1 mrad
Polarization	Horizontal

1. Due to our continuous product improvement program, specifications may change without notice.
2. Specifications apply to operation at 800 nm, 60 nm bandwidth.
3. Bandwidth range accessible by computer control at 800 nm. User specified bandwidth configurations are available.
4. Center wavelength can be tuned at bandwidths <30 nm; otherwise center wavelength is fixed at 800 nm.
5. Specification represents RMS noise measured in a 10 Hz to 10 MHz bandwidth.
6. Percent power drift in any 2-hour period after a 1-hour warm-up.



Bandwidth stability of Mai Tai SP over 30 hours. Inset: Typical wavelength spectrum for the Mai Tai SP configured for 60 nm operation.

Mai Tai SP Laser Head



Spectra-Physics[®] Lasers Sales: 1-800-775-5273 sales@spectra-physics.com www.newport.com/spectra-physics



A Newport Corporation Brand

3635 Peterson Way, Santa Clara, CA 95054, USA

PHONE: 1-800-775-5273 1-408-980-4300 FAX: 1-408-980-6923 EMAIL: sales@spectra-physics.com

Complete listings for all global office locations are available online at www.newport.com/contact

	PHONE	EMAIL		PHONE	EMAIL
Belgium	+32-(0)800-11 257	belgium@newport.com	Irvine, CA, USA	+1-800-222-6440	sales@newport.com
China	+86-10-6267-0065	china@newport.com	Netherlands	+31-(0)30 6592111	netherlands@newport.com
France	+33-(0)1-60-91-68-68	france@newport.com	United Kingdom	+44-1235-432-710	uk@newport.com
Japan	+81-3-3794-5511	spectra-physics@splasers.co.jp	Germany / Austria / Switzerland	+49-(0)6151-708-0	germany@newport.com
Taiwan	+886 -(0)2-2508-4977	sales@newport.com.tw			

Newport Corporation, Irvine, California and Franklin, Massachusetts; Evry and Beaune-La-Rolande, France and Wuxi, China have all been certified compliant with ISO 9001 by the British Standards Institution. Santa Clara, California is DNV certified.

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DS-011003 (04/10)