Millennia® Prime™

RUGGED HIGH-POWER CW 532nm DPSS LASERS

The Millennia Prime Advantage

- Rugged platform for high reliability
- Long life ProLite® diodes
- EternAlign™ permanent optics mounting technology
- 5, 6, 10 and 15 W of CW output power at 532 nm
- Compact footprint for easy integration
- Ultra low noise of <0.04% rms
- Pointing stability better than 2 μrad/°C

Since 1996, the Spectra-Physics Millennia® product family has set the standard for high power visible CW diode-pumped solid state (DPSS) lasers, delivering unparalleled performance. By leading in product life, reliability and uptime, the Millennia lasers have become the market reference with thousands of lasers installed worldwide.

The new Millennia Prime™ class of lasers has been re-engineered for even tougher reliability, longer life and better value. Millennia Prime lasers deliver up to 15 W of average power, low noise, excellent beam quality and superior beam pointing stability. They are the lasers of choice for sensitive scientific applications such as pumping high power Ti:Sapphire lasers, or high throughput 24/7 industrial applications.

The Millennia Prime lasers benefit from years of experience. They incorporate ProLite® diodes with industry-leading reliability and lifetime. The laser optical resonator features ultrastable EternAlign™ optical mount technology for perfect alignment over the lifetime of the laser. Tested against the toughest standards, proven in the most demanding scientific and industrial applications, and backed by the best warranty in the industry, the Millennia Prime lasers offer unmatched value and performance.

APPLICATIONS

Industrial Applications

- Laser doping of solar cells
- Film subtitling
- Hard disk surface texturing
- Semiconductor wafer inspection
- Materials processing

Scientific Applications

- Pumping CW and mode-locked Ti:Sapphire lasers
- Pumping solid state and dye lasers
- Spectroscopy
- Flow cytometry
- Medical diagnostics

Spectra-Physics®
A Newport Corporation Brand

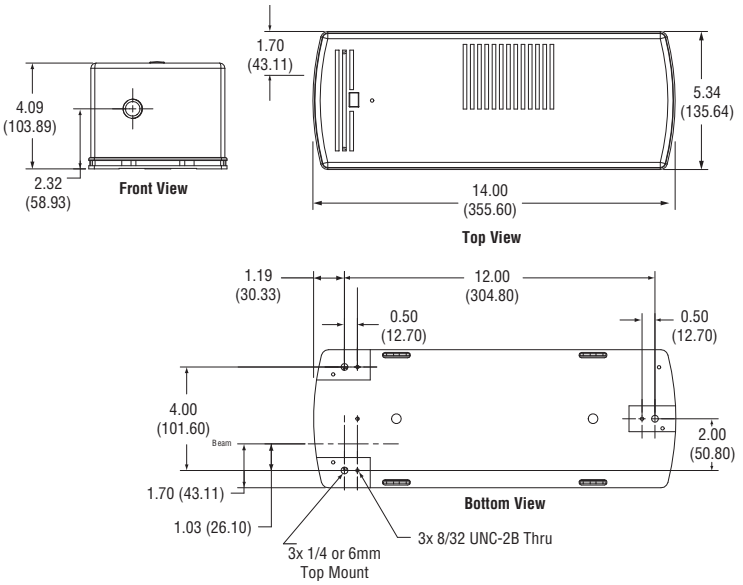
Millennia® Prime™

Specifications

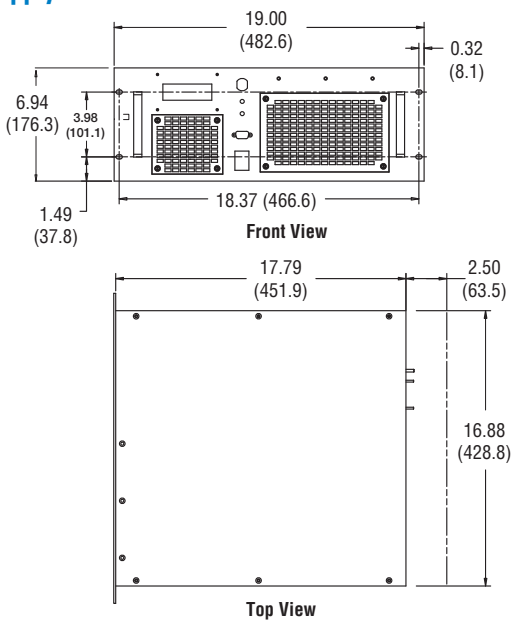
Output Characteristics[1, 2]	Millennia Prime
Output Power	5, 6, 10, 15 W
Wavelength	532 nm
Spatial Mode[3]	TEM_{00}
Beam Quality (M^2)	<1.1
Beam Diameter ($1/e^2$)[4]	2.3 mm ±10 %
Beam Divergence[4]	<0.5 mrad
Polarization[5]	>100:1 vertical
Power Stability[6]	±1%
Beam Pointing Stability[7]	2 µrad/°C
Noise[8]	<0.04% rms
Boresight Tolerance	Near field ±0.25 mm Far field <3 mrad
Power Requirements	
Operating Voltage	90–130 VAC / 180–260 VAC, 50 Hz / 60 Hz
Power Consumption	700 W max / 275 W typical[9]
Environmental Specifications	
Operating Temperature	64–95°F (18–35°C)
Relative Humidity	8–85%, non-condensing
Cooling Requirements	
Laser Head[10]	Closed-loop chiller
Power Supply	Air-cooled
Laser Head Physical Characteristics	
Dimensions	4.1 x 5.3 x 14 in (104 x 136 x 355 mm)
Weight	22 lbs (10 kg)
Umbilical Length	13.1 ft (4 m)
Cable Length	8 ft (2.4 m)
Power Supply Physical Characteristics	
Dimensions	6.9 x 19 x 17.9 in (176 x 483 x 452 mm)
Weight	58 lb (26.4 kg)

1. All performance characteristics guaranteed at specified output power
2. Due to our continuous product improvement program, specifications are subject to change without notice
3. Beam ellipticity <10%
4. Measured at exit port (at $1/e^2$ point)
5. Vertical polarization standard; horizontal polarization option available
6. Measured over 2-hour period, after a 15 minute warm-up
7. Measured at farfield x and y position, after a 30 minute warm-up
8. Measured over a 10 Hz to 0.1 GHz bandwidth at the specified output power
9. Power consumption for Millennia Prime 10 W and 15 W models is 1100 W max / 500 W typical
10. For air-cooled versions of Millennia Prime, please contact Spectra-Physics

Millennia Prime Laser Head Dimensions



Power Supply Dimensions



Dimension in inches (mm)

Spectra-Physics
A Newport Corporation Brand

www.newport.com/spectra-physics

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

	PHONE	EMAIL		PHONE	EMAIL
Belgium	+32-(0)0800-11 257	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.

Newport Corporation, Global Headquarters
1791 Deere Avenue, Irvine, CA 92606, USA
PHONE: 1-800-222-6440 1-949-863-3144
EMAIL: sales@newport.com
Complete listings for all global office locations are available online at www.newport.com/contact

DS-05092 (11/10)