

Millennia® eV™

Highest Power CW 532 nm DPSS Lasers

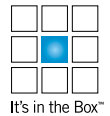
mks | Spectra-Physics®

The Millennia eV from Spectra-Physics is the highly successful product family of CW DPSS green lasers providing unprecedented power levels and versatility. Millennia eV models are now available with 5 W, 10 W, 15 W, 20 W, and 25 W of CW power at 532 nm. All Millennia eV feature ultra-low optical noise, TEM₀₀ beam quality and best-in-class power stability.

The Millennia platform is based on Spectra-Physics' *It's in the Box™* design, where the laser optical cavity, diode and control electronics are all integrated in a single, compact package, eliminating the need for an external power supply.

Millennia eV benefits from Spectra-Physics' extensive experience in the design of rugged industrial lasers. Millennia eV lasers utilize long life, highly reliable laser diodes. The result is a highly reliable laser, ensuring dependable, easy turnkey operation with exceptional value.

With its industry leading scalability from 5 W to 25 W average power and high reliability, Millennia eV is the laser of choice for demanding scientific applications such as the pumping of high power ultrafast and CW Ti:Sapphire lasers and high power, high throughput industrial applications.



The Millennia eV Advantage

- Industry leading power scalability - 5 W to 25 W
- Best-in-class power stability and beam quality
- Exceptional value and low cost of ownership
- Integrated laser head and power supply
- High reliability for turn-key operation
- Low optical noise

Applications

Scientific Applications

- CW and mode-locked Ti:Sapphire laser pumping
- Solid state and dye laser pumping
- Spectroscopy

Industrial Applications

- Laser doping of solar cells
- Materials processing



Millennia eV Specifications⁸

Output Characteristics ^{1, 2}		
Output Power	5 W, 10 W, 15 W	20 W, 25 W
Wavelength	532 nm	
Spatial Mode ³	TEM ₀₀	
Beam Quality (M ²)	<1.1	
Beam Diameter (1/e ²)	2.3 mm ±10%	
Beam Divergence	<0.5 mrad	
Polarization ⁴	>100:1 vertical	
Power Stability ⁵	±1%	
Beam Pointing Stability ⁶	2 μrad/°C	
Noise ⁷	<0.04% rms	
Power Requirements		
Operating Voltage	100–240 VAC, 50/60 Hz	
Power Consumption	<250 W (max)	<350 W (max)
Environmental Specifications		
Operating Temperature	64–95°F (18–35°C)	
Relative Humidity	8–85%, non-condensing	
Cooling Requirements	Closed-loop chiller	
Physical Characteristics		
Dimensions (L × W × H)	14.75 × 6.00 × 4.08 in (374.7 × 152.4 × 103.8 mm)	23.0 × 6.0 × 4.5 in (584.2 × 152.4 × 114.3 mm)
Weight	<15 lbs (<7 kg)	<26 lbs (<12 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. Vertical polarization standard; horizontal polarization option available.

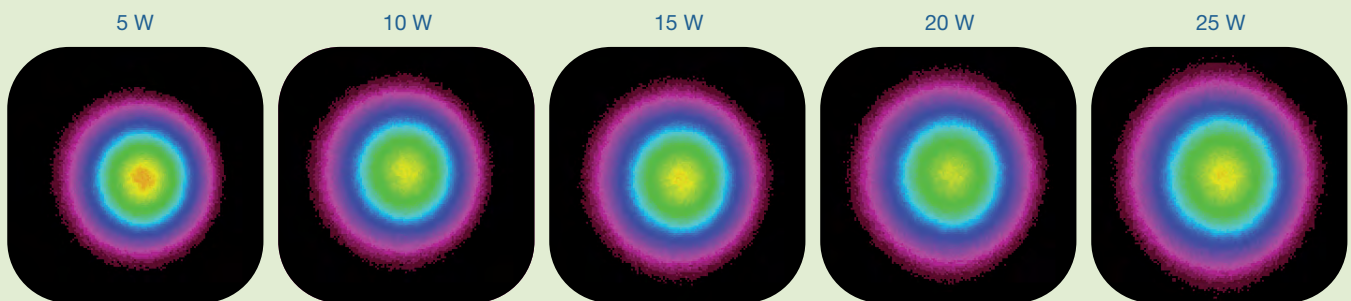
5. Measured over 2-hour period, after a 30 minute warm-up.

6. Measured at farfield x and y position, after a 30 minute warm-up.

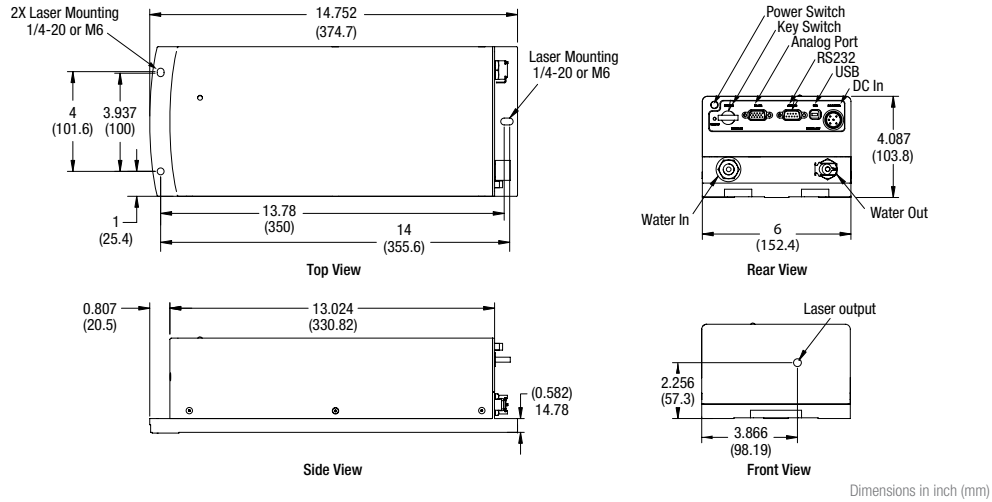
7. Measured over a 10 Hz to 0.1 GHz bandwidth at the specified output power.

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

Power Scalability and Exceptional Beam Quality



Millennia eV (5–15 W) Dimensions



Millennia eV (20–25 W) Dimensions

