The Millennia eV from Spectra-Physics is the next generation Millennia, extending the highly successful product family of CW DPSS green lasers to 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, TEM$_{00}$ 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 next generation 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 from 5 W to 25 W
- Exceptional value and low cost of ownership
- Integrated laser head and power supply
- Best-in-class power stability and beam quality
- Low optical noise
- High reliability for turn-key operation

### Applications

**Scientific Applications**
- Pumping CW and mode-locked Ti:Sapphire lasers
- Pumping solid state and dye lasers
- Spectroscopy

**Industrial Applications**
- Laser doping of solar cells
- Materials processing
# Millennia eV Specifications

<table>
<thead>
<tr>
<th>Output Characteristics(^1, 2)</th>
<th>5 W, 10 W, 15 W</th>
<th>20 W, 25 W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>5 W, 10 W, 15 W</td>
<td>20 W, 25 W</td>
</tr>
<tr>
<td>Wavelength</td>
<td>532 nm</td>
<td></td>
</tr>
<tr>
<td>Spatial Mode(^3)</td>
<td>TEM(_{00})</td>
<td></td>
</tr>
<tr>
<td>Beam Quality (M(^2))</td>
<td>&lt;1.1</td>
<td></td>
</tr>
<tr>
<td>Beam Diameter (1/e(^2))</td>
<td>2.3 mm ±10%</td>
<td></td>
</tr>
<tr>
<td>Beam Divergence</td>
<td>&lt;0.5 mrad</td>
<td></td>
</tr>
<tr>
<td>Polarization(^4)</td>
<td>&gt;100:1 vertical</td>
<td></td>
</tr>
<tr>
<td>Power Stability(^5)</td>
<td>±1%</td>
<td></td>
</tr>
<tr>
<td>Beam Pointing Stability(^6)</td>
<td>2 μrad/°C</td>
<td></td>
</tr>
<tr>
<td>Noise(^7)</td>
<td>&lt;0.04% rms</td>
<td></td>
</tr>
</tbody>
</table>

## Power Requirements

<table>
<thead>
<tr>
<th>Operating Voltage</th>
<th>100–240 VAC, 50/60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Consumption</td>
<td>&lt;250 W (max)</td>
</tr>
<tr>
<td></td>
<td>&lt;350 W (max)</td>
</tr>
</tbody>
</table>

## Environmental Specifications

<table>
<thead>
<tr>
<th>Operating Temperature</th>
<th>64–95°F (18–35°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative Humidity</td>
<td>8–85%, non-condensing</td>
</tr>
<tr>
<td>Cooling Requirements</td>
<td>Closed-loop chiller</td>
</tr>
</tbody>
</table>

## Physical Characteristics

<table>
<thead>
<tr>
<th>Dimensions (L × W × H)</th>
<th>14.75 x 6.00 x 4.08 in (374.7 x 152.4 x 103.8 mm)</th>
<th>23.0 x 6.0 x 4.5 in (584.2 x 152.4 x 114.3 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>&lt;15 lbs (&lt;7 kg)</td>
<td>&lt;26 lbs (&lt;12 kg)</td>
</tr>
</tbody>
</table>

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.

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Power Scalability and Exceptional Beam Quality

![Power Scalability and Exceptional Beam Quality](image)
### Millennia eV (5–15 W) Dimensions

**Dimensions in inch (mm)**

- **Top View**
  - 2X Laser Mounting
    - 1/4-20 or M6
  - Laser Mounting
    - 1/4-20 or M6
  - 14.752 (374.7)
  - 13.78 (350)
  - 14 (356.6)

- **Side View**
  - 0.807 (20.5)
  - 13.024 (330.62)
  - (0.582) 14.78

- **Front View**
  - Laser output
  - Power Switch
  - Key Switch
  - DC In
  - USB
  - RS-232
  - Analog Port
  - Water In
  - Water Out
  - 2.556 (65.3)
  - 3.866 (98.19)

- **Bottom View**
  - 2X Laser Mounting
    - 1/4-20 or M6
  - Laser Mounting
    - 1/4-20 or M6
  - 1.00 (25.4)
  - 13.75 (349.3)
  - 14.00 (356.6)
  - 23.0 (584)

### Millennia eV (20–25 W) Dimensions

**Dimensions in inch (mm)**

- **Right View**
  - 2X Laser Mounting
    - 1/4-20 or M6
  - Laser Mounting
    - 1/4-20 or M6
  - 2.255 (57.28)
  - 2.5 (63.5)
  - 4.5 (114.3)

- **Side View**
  - 0.99 (25.2)
  - 21.5 (546)
  - 0.87 (22.1)

- **Front View**
  - Laser Output
  - Power Switch
  - Water In
  - Water Out
  - 2.5 (63.5)
  - 3.00 (76.2)
  - 13.75 (349.3)
  - 14.00 (355.6)

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