The Series 3500 DPSS laser (US Patent #6,002,695) is the most efficient, high power, quasi-CW DPSS UV laser commercially available. Using only a single 20W diode bar, the Series 3500 has demonstrated powers in excess of 3.0 Watts at 355 nm. This high efficiency conversion means that the laser can be operated at the normal specification, with minimum stress to the optical components and with a reduced diode current to extend the operating life. Minimizing the diode power required to generate the 355nm third harmonic output from the laser also minimizes the thermal effects in the gain medium (Nd:YVO4), which results in the lowest possible distortion to the beam. Both the second and third harmonics are generated intra-cavity, thus reducing the need for tight focusing into the non-linear crystals. The result is a stable, highpower UV laser with an $M^2$ specification of $< 1.2$, a near perfect TEMoo mode.

**FEATURES**
- Up to 3W Power at 355 nm
- Rugged, Low Maintenance Design
- Excellent Beam Quality $M^2 < 1.2$
- Q-Switched Repetition Rate
- Stability Better Than 5% Over 8 Hours
- Single Shot to $> 100$ kHz (Quasi-CW)
- Low Cost of Ownership

**APPLICATIONS**
- ITO Removal
- Spectroscopy
- Laser Marking
- Micromachining
- Wafer Inspection
- Stereolithography
- Direct Write/ Repair
- Molecular Uncaging
- Bio-Particle Detection
SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>Avg. Power</th>
<th>Warranted Avg. Power</th>
<th>Pulse Length</th>
<th>Repetition Rate</th>
<th>Pulse Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>3501-100</td>
<td>&gt; 100 mW</td>
<td>&gt; 100 mW</td>
<td>&lt; 65 nsec</td>
<td>100 kHz</td>
<td>1 µJ</td>
</tr>
<tr>
<td>3505-100</td>
<td>&gt; 500 mW</td>
<td>&gt; 350 mW</td>
<td>&lt; 65 nsec</td>
<td>100 kHz</td>
<td>5 µJ</td>
</tr>
<tr>
<td>3510-30</td>
<td>&gt; 1.0 W</td>
<td>&gt; 0.7 W</td>
<td>&lt; 30 nsec</td>
<td>30 kHz</td>
<td>33 µJ</td>
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<tr>
<td>3520-30</td>
<td>&gt; 2.0 W</td>
<td>&gt; 1.4 W</td>
<td>&lt; 30 nsec</td>
<td>30 kHz</td>
<td>67 µJ</td>
</tr>
<tr>
<td>3530-30</td>
<td>&gt; 3.0 W</td>
<td>&gt; 2.1 W</td>
<td>&lt; 30 nsec</td>
<td>30 kHz</td>
<td>100 µJ</td>
</tr>
</tbody>
</table>

Other models can be specified from 50 mW to 3 W, with any customer defined rep. rate from 1 kHz to 150 kHz.

COMMON SPECIFICATIONS

PERFORMANCE
- Wavelength: 354.7 nm
- Mode (M²) Specification: TEMoo (M² < 1.2)
- Beam Diameter (1/e²) at exit: 1.5 mm (collimated)
- Pulse to Pulse Stability: < 10%
- Power Stability (8 hr. drift at const. temp.): < 5%
- Beam pointing stability (at const. temp.): < 50 µrad
- Polarization (Linear, Vertical): > 100:1
- Beam Divergence (full angle): < 0.6 mrad

ELECTRICAL
- Input Voltage: 90 - 240 VAC
- Power Consumption (max.): 500 W
- Ambient Operating Temp. (non-condensing): 10 - 30°C

PHYSICAL
- Laser Head Dim. (LWH): 50.8 x 19.05 x 16.5 cm
- Laser Head Weight: 13.6 Kg
- Laser Power Supply Dim. (LWH): 31 x 34.3 x 14.6 cm
- Laser Power Supply Weight: 5 Kg
- Cooling Systems Dim. (LWH): 28.7 x 22.4 x 38.9 cm
- Cooling Systems Weight: 9.1 Kg

SYSTEM REQUIREMENTS
Models can be specified from 50 mW to 3 Watts, with any customer defined rep. rate from 1 kHz to 150 kHz. All models consist of a head, compact power supply (3500 PS) and closed loop cooling system. The system requires a standard electrical outlet (100 to 240 VAC, 50/60 Hz) capable of supplying 600W. The laser head can be mounted in any orientation using the standard mounting feet. Power supply and cooling system should be located in a ventilated environment. The 3500 Series complies with all Laser safety and CE electrical standards. The closed loop cooling system requires approximately three liters of distilled water at install.

Please contact DPSS Lasers Inc. to discuss your specific needs and how we can best serve you.

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