Onda ns Q-Switched DPSS laser

Features

Up to 0.8mJ pulse energy
@266nm @355nm @532nm @1064nm
2 to 10ns pulsewidth
Single shot to 100kHz
MOPA configurations
Monolithic design
Air cooling
Low heat waste

Applications

Specialty marking
Micromachining of glass
Electronic manufacturing
LIDAR and bathymetry
Thin film removal
Hole drilling

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SOLUZIONI LASER INNOVATIVE
Developed as a high-energy seeder for advanced MOPA systems, Onda is the new DPSS ns-laser platform aimed to high-end applications requiring both excellent beam quality and high peak power in order to process metals, glass, plastics, delicate and hard materials. Onda is available at four different wavelengths: 266, 355, 532 and 1064nm. The internal optical layout and the accurate temperature management allow to get relevant pulse energy performances without compromising the lifetime of the THG and FHG stages. All of Onda models can work from single shot to 50 kHz or up to 100 kHz with a pulsewidth between 2 and 10 ns and share the same mechanical footprint and electronic interface. Compactness, insensitivity to environmental conditions and ease of handling allow superior operation flexibility and performance / cost ratio. A new version of the digital Control Box and the new proprietary Software Interface are available for simplified remote control and monitoring.

OPTIONS AVAILABLE:
- Beam expanding and collimating optics
- Fiber coupling
- Low jitter option
- Extended operating temperature range
- Pulse energy modulation
- Circular polarization
- Monitoring photodiode
- Red aiming beam
- Remote control box and software interface
- AC-DC power supply
- Higher energy MOPA configurations
In the following table the main features of the standard configurations are presented.

<table>
<thead>
<tr>
<th>Onda models</th>
<th>Onda 266nm</th>
<th>Onda 355nm</th>
<th>Onda 532nm</th>
<th>Onda 1064nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary wavelength</td>
<td>266nm</td>
<td>355nm</td>
<td>532nm</td>
<td>1064nm</td>
</tr>
<tr>
<td>Max average power</td>
<td>1W</td>
<td>2W</td>
<td>5W</td>
<td>15W</td>
</tr>
<tr>
<td>Max pulse energy</td>
<td>80µJ</td>
<td>200µJ</td>
<td>400µJ</td>
<td>800µJ</td>
</tr>
<tr>
<td>Repetition rate</td>
<td>Single Shot to 50 kHz</td>
<td>Single Shot to 100 kHz</td>
<td></td>
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<tr>
<td>Pulsewidth</td>
<td>2 to 6ns</td>
<td>2 to 10ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max peak power</td>
<td>40kW</td>
<td>100kW</td>
<td>200kW</td>
<td>400kW</td>
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<tr>
<td>Polarization</td>
<td>Linear 100:1 (option: circular polarization)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beam quality ($M^2$)</td>
<td>$&lt; 1.3$</td>
<td>$&lt; 1.5$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooling</td>
<td>Air-cooled (option: water cooling and contact cooling)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>DC Voltage IN</td>
<td>24 V</td>
<td></td>
<td></td>
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<tr>
<td>Overall mechanical dimensions</td>
<td>$19 \times 10 \times 9 \text{ cm}^3$</td>
<td>$7 \times 4 \times 3 \text{ in}^3$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total weight</td>
<td>$&lt; 2.5 \text{ kg}$</td>
<td>($&lt; 5.5 \text{ lbs}$)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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