Quantas Q2-1064

HIGH ENERGY AIR-COOLED Q-SWITCHED LASER

FEATURES

- Up to 70 mJ pulse energy
- Air cooled (no water)
- 100 Hz repetition rate
- Built-in sync pulse generator for triggering of user equipment
- Remote monitoring and control via built-in Ethernet / WiFi interface
- Optional 2nd, 3rd, 4th or 5th smart harmonic generators
- Optional attenuator for fundamental wavelength
- Guaranteed >1 Gshot lifetime

APPLICATIONS

- Light Induced Breakdown Spectroscopy (LIBS)
- OPO, dye laser, Ti:sapphire pumping
- Remote sensing
- Laser ablation
- Time-of-Flight Spectroscopy (TOFS)
- Light Induced Fluorescence (LIF) Spectroscopy
- Flash photolysis
- Matrix Assisted Laser Desorption / Ionization (MALDI)
- Pulsed light deposition (PLD)

Quantas Q2 models set new standard in Q-switched laser market. Q2 series diode pumped, fully air-cooled, Q-switched lasers are designed for wide range of applications that require high peak power pulses. Robust, reliable design is what makes this series ideal tool for applications like Light Induced Breakdown Spectroscopy (LIBS), LCD repair, laser ablation, remote sensing and many others. Broad selection of models are available offering 70 mJ @ 50 Hz or 40 mJ @ 100 Hz pulse energies.

Less than 10 ns pulse duration allows efficient fundamental wavelength conversion to higher harmonics with shortest wavelength available of 213 nm. Wavelength extensions into infrared range by use of OPO are available by request.

TEC based cooling eliminate risks associated with water cooling (like leaks, circuit shortening etc.) as well as reduce running cost due to no maintenance required.

Low jitter triggering pulses for user equipment are available with up to 300 μs lead in internal triggering mode. If required, laser pulsing can be externally triggered from delay generator.

Laser controlled via built-in Ethernet port trough web-server with option to add Wi-Fi adapter. It allows users to monitor and control laser remotely.

Quantum Light Instruments

WWW.QLINSTRUMENTS.COM
SPECIFICATIONS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>Quantas Q2-1064</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Q2-20</td>
</tr>
<tr>
<td>Wavelength</td>
<td>1064 nm</td>
</tr>
<tr>
<td>Pulse energy</td>
<td>50 mJ</td>
</tr>
<tr>
<td>Typical pulse duration</td>
<td>&lt;10 ns</td>
</tr>
<tr>
<td>Pulse to pulse energy stability</td>
<td>&lt;0.5 % RMS</td>
</tr>
<tr>
<td>Power drift</td>
<td>± 3.0 %</td>
</tr>
<tr>
<td>Maximum pulse repetition rate ²⁾</td>
<td>20 Hz</td>
</tr>
<tr>
<td>Beam profile</td>
<td>bell-shaped, &gt;75 % fit to Gaussian</td>
</tr>
<tr>
<td>Beam divergence ³⁾</td>
<td>&lt; 2 mrad</td>
</tr>
<tr>
<td>Polarization</td>
<td>linear, horizontal</td>
</tr>
<tr>
<td>Typical beam diameter ⁷⁾</td>
<td>3.5 mm</td>
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<tr>
<td>Jitter</td>
<td>&lt; 1 ns RMS</td>
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</table>

OPTIONAL HARMONICS GENERATOR MODULE ⁹⁾

<table>
<thead>
<tr>
<th>Pulse energy, mJ</th>
<th>532 nm</th>
<th>355 nm</th>
<th>266 nm</th>
<th>213 nm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25 mJ</td>
<td>15 mJ</td>
<td>7 mJ</td>
<td>2.5 mJ</td>
</tr>
<tr>
<td></td>
<td>20 mJ</td>
<td>12 mJ</td>
<td>5 mJ</td>
<td>1.5 mJ</td>
</tr>
<tr>
<td></td>
<td>35 mJ</td>
<td>20 mJ</td>
<td>10 mJ</td>
<td>3 mJ</td>
</tr>
<tr>
<td></td>
<td>20 mJ</td>
<td>12 mJ</td>
<td>5 mJ</td>
<td>1.5 mJ</td>
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</table>

OPTIONAL ATTENUATOR ¹⁰⁾

<table>
<thead>
<tr>
<th>Wavelength, nm</th>
<th>1064 nm, 532 nm, 355 nm</th>
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<tbody>
<tr>
<td>Attenuation range</td>
<td>5 – 95 %</td>
</tr>
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</table>

DIMENSIONS

<table>
<thead>
<tr>
<th>Laser head (W×L×H)</th>
<th>190 × 408 × 120 mm³</th>
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<tbody>
<tr>
<td>Harmonics generator module (W×L×H)</td>
<td>113 × 242 × 112 mm³</td>
</tr>
<tr>
<td>Controller unit (W×L×H)</td>
<td>160 × 104 × 55 mm³</td>
</tr>
<tr>
<td>Power adapter, typical (W×L×H)</td>
<td>100 × 200 × 50 mm³</td>
</tr>
</tbody>
</table>

OPERATING REQUIREMENTS

<table>
<thead>
<tr>
<th>Cooling requirements</th>
<th>air cooled</th>
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<tr>
<td>Ambient temperature</td>
<td>15 – 30 °C</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>10 – 80 % (non-condensing)</td>
</tr>
<tr>
<td>Mains voltage</td>
<td>90 – 230 V AC, single phase, 47 – 63 Hz ¹¹⁾</td>
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<tr>
<td>Power consumption</td>
<td>100 W</td>
</tr>
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DRAWINGS

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