QUARK 1000
Ultrafast Ti:Sa Laser Series

FEATURES
• Industrial grade for a compact footprint
• Unmatched energy stability and beam pointing
• High contrast using XPW filter
• Tango Panorama software
• Option: beam transport to experimental area

APPLICATIONS
• Electrons and ions acceleration
• Plasma Physics
• VUV-Xray generation
• High order harmonic generation
• Time resolved spectroscopy
QUARK 1000
Ultrafast Ti:Sa Laser Series

Recognized project management skills to achieve the most demanding systems in terms of performance and schedule commitments. The unique PW laser reference with demonstrated specification and industrial reliability dedicated to laser facilities.

Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repetition rate (Hz)</td>
<td>Up to 1 Hz</td>
</tr>
<tr>
<td>Peak Power (PW)</td>
<td>≥ 1</td>
</tr>
<tr>
<td>Central Wavelength (nm)</td>
<td>~ 800 nm</td>
</tr>
<tr>
<td>Energy per pulse (J)</td>
<td>&gt; 25</td>
</tr>
<tr>
<td>Pulse to pulse energy stability (%)</td>
<td>≤ 1</td>
</tr>
<tr>
<td>Pulse duration FWHM (fs)</td>
<td>down to 25</td>
</tr>
</tbody>
</table>
| Contrast Ratio (ps)     | 1 x 10⁷ under 5
|                         | 1 x 10⁸ under 30
|                         | 1 x 10¹⁰ under 100
| Strehl Ratio            | ≥ 0.85 (with deformable mirror) |

Physical characteristics

QUARK 1000 (1 shot/min) layout(*)
Table size: 5.6 x 4.2 m² (18.4 x 13.8 ft²)

(*): Other configurations are available on request. Specifications are dependent on the chosen configuration and options.

Focus on Beam Pointing Stability

Beam pointing stability < 1 μrad rms

Contrast measurement with XPW

Strehl ratio > 0.9 and far field

Europe
Thales Optronique S.A.S.
2, avenue Gay-Lussac – CS 90502
78995 Élancourt Cedex – FRANCE
Tel.: +33 (0)1 30 96 89 45
Fax.: +33 (0)1 30 96 89 59
thales-laser@fr.thalesgroup.com

Japan
Thales Japan K.K.
Akasaka Imaiike Tower 8F,
2-177, Akasaka, Minato-ku,
Tokyo 107-0052 - JAPAN
Tel.: +81 3 6234 8100
Fax.: +81 3 6234 8101

North America
Thales Components Corporation Inc.
40G Commerce Way, PO Box 540
Tottowa, New Jersey 07511-0540 USA
Tel.: +1 (973) 812-9000
Fax.: +1 (973) 812-9050