**FQSS 213-50**

Diode pumped passively Q-switched solid state laser

- 213 nm
- single pulse
- \( \leq 1.3 \text{ ns} \)
- 1 – 30 Hz
- > 50 μJ @ 20Hz

| **biology** · **biomedicine** · **chemistry** · **analytics** |
|-----------------|-----------------|
| **Optical Data** | **Wavelength** | 213 nm |
|                  | **Beam Divergence (full angle)** | < 1.5 mrad |
|                  | **Beam Ellipticity** | < 2:1 |
|                  | **Beam Diameter** | 450 ± 150 μm (at laser exit) |
|                  | **Peak Power** | > 40 kW @ 20 Hz |
|                  | **Pulse Energy** | > 50 μJ @ 20 Hz |
|                  | **Pulse Repetition Rate (with external trigger)** | 1 – 30 Hz |
|                  | **Pulse Width (FWHM)** | \( \leq 1.3 \text{ ns} \) |
|                  | **Polarization Ratio** | > 100:1, horizontal |
|                  | **Long term pulse energy stability (6 hours)** | \( < \pm 5 \% \) |
|                  | **Pulse-To-Pulse Stability** | \( < 3 \% \text{ rms} \) |
|                  | **Laser Classification** | 4 / IV |
|                  | **Residual Emission** | (266nm, 532nm, 1064nm) |< 0.2 μJ |

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<thead>
<tr>
<th><strong>Optical Output</strong></th>
<th><strong>Free Beam</strong></th>
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| **Electrical Data** | **Electrical Power Consumption** | < 90 W |
|---------------------|---------------------------------|
| Line Voltage        | 100 - 240 V AC (50-60 Hz) or 24 V DC |

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<thead>
<tr>
<th><strong>Interface</strong></th>
<th><strong>RS 232, USB</strong></th>
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| **Miscellaneous** | **Warm-up Time** | < 10 min |
|-------------------|------------------|
|                   | **Operating Temperature** | 18 - 38 °C |
|                   | **Laser Head Size** | 283 x 65 x 45 mm (core dimensions) |

<table>
<thead>
<tr>
<th><strong>Options</strong></th>
<th><strong>Manual Shutter or Electrical Beam Blocker</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>External Telescope (e.g. M=5)</strong></td>
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<td><strong>Stand Alone system (CDRH compliant; incl. key switch, heat sink, manual beam shutter)</strong></td>
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</tbody>
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1) Drift over 6 hours, energy averaged over 10 sec after 5 min of continuous operation, temperature variation < 3 °C/hour.

2) RMS over 1000 pulses after 5 min of continuous operation.
Laser Head and Controller

The FQSS213-50 lasers is class 4 according to IEC 60825-1:2014.

Laser Safety Labels

The FQSS213-50 lasers is class 4 according to IEC 60825-1:2014.

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