SM Series
Supercontinuum White Light Source

Our SM series is a broadband laser intended for everyday use in labs. They are an effective replacement for lamp, SLEDs, mode-hop tunable laser because they reach multiple wavelengths with a flat, stable, broadband spectrum with a fibered output. Turn-key benchtop or compact OEM packaging, maintenance-free, robust and user-friendly, these sources are convenient for general purpose applications.

FEATURES
• From visible to IR
  400 nm - 2400 nm
• High spatial coherence
  singlemode TEM00
• Free-running or externally triggerable
• High energy per pulse > 3 µJ
• Total average power up to 250 mW
• Maintenance-free
• Reliable all fibered compact broadband source

APPLICATIONS
• Optical component testing
• OCT (Optical Coherence Tomography)
• Spectroscopy
• Metrology, LIDAR
• High resolution imaging

NEW cost effective solution
From 400 to 2400 nm
Up to 250 mW
## SM Series
### Supercontinuum White Light Source

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Spectral bandwidth</strong></td>
<td><strong>min</strong></td>
<td>&lt; 400 nm</td>
<td>&lt; 420 nm</td>
<td>&lt; 450 nm</td>
</tr>
<tr>
<td></td>
<td><strong>Max</strong></td>
<td>&gt; 2400 nm</td>
<td>&gt; 2400 nm</td>
<td>&gt; 2400 nm</td>
</tr>
<tr>
<td><strong>Total average power</strong>&lt;sup&gt;(1)&lt;/sup&gt;</td>
<td>&gt; 100 mW</td>
<td>&gt; 120 mW</td>
<td>&gt; 150 mW</td>
<td>&gt; 130 mW</td>
</tr>
<tr>
<td><strong>Total Visible power</strong>&lt;sup&gt;(1)&lt;/sup&gt;</td>
<td>&gt; 10 mW</td>
<td>&gt; 12 mW</td>
<td>&gt; 30 mW</td>
<td>&gt; 15 mW</td>
</tr>
<tr>
<td><strong>Seed repetition rate</strong>&lt;sup&gt;(2)&lt;/sup&gt;</td>
<td>&gt; 25 kHz (typical ~ 30 kHz)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Triggerable range</strong>&lt;sup&gt;(3)&lt;/sup&gt;</td>
<td>1 Hz up to &gt; 15 kHz (typical ~ 20 kHz)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Timing jitter</strong>&lt;sup&gt;(4)&lt;/sup&gt;</td>
<td>&lt; 2µs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Power stability</strong>&lt;sup&gt;(5)&lt;/sup&gt;</td>
<td>+/- 1 %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Seed pulse width</strong></td>
<td>~ 1 ns</td>
<td>&gt; 1 ns</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Spatial mode</strong></td>
<td>Singlemode Gaussian TEM00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Polarization state</strong></td>
<td>Unpolarized</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Laser output</strong></td>
<td>FC/APC (&gt; 1 meter armored cable)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Synchronization output</strong></td>
<td>External Trigger Output</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### OPTIONS
1. **Laser output**
   - FC/APC or FC/PC or other, or collimated output (lens or achromatic)
2. **Automatic Power Control**: APC mode of operation 10%-100%
3. **Output pigtail length**: ~ 2 m
4. **Jitter optimization** < 500 ns (pulse to pulse)
   - Optimization at one repetition rate other than nominal (> 500 Hz)
5. **Laser optimization** at another nominal repetition rate

<sup>(1)</sup> Power at the nominal repetition rate. Visible power measured on the range 370-850 nm.

<sup>(2)</sup> Nominal repetition rate (maximum repetition rate) in free-running mode of operation.

<sup>(3)</sup> 3 mode of operations: free-running (nominal), externally triggered via analog input (down to 1Hz), externally triggered via computer interface (down to 10Hz). Additional APC mode (Automatic Power Control) upon request.

<sup>(4)</sup> After warm-up time.

<sup>(5)</sup> Typical value of long-term stability for total average power at one fixed repetition rate, with a FC/APC connector.

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[QR Code]

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200 nm < 2400 nm - P < 200 mW - Q < 3.2 µJ - t < 2 ns
Class 3b (IIIb) Laser product IEC 60825.1 - 2007
Complies with 21 CFR 1040.10 and 1040.11

All specifications are subject to change without notice.
SM Series
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Typical Spectral Power Density - Range 350-850 nm

Wavelength, nm

Spectral power density, µW/nm

- SM-30-400
- SM-30-420
- SM-30-450
- SM-30-HE-410
- SM-30-HE-450

Typical Spectral Energy Density

Wavelength, nm

Spectral energy density, nJ/nm

- SM-30-450
- SM-30-HE-450

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Invisible and visible laser radiation. Avoid exposure to beam.
Class 3b (IIIb) laser product.

200 nm < λ < 2400 nm - P < 200 mW - Q < 3.2 µJ - τ < 2 ns
Class 3b (IIIb) laser product IEC 60825-1:2007
Complies with 21 CFR 1040.10 and 1040.11

All specifications are subject to change without notice.
**SM Series**

**Supercontinuum White Light Source**

### SM Benchtop Turnkey Format

**Mechanical/Environmental/Electrical specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control interface</td>
<td>Front panel and USB</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>+5°C to +45°C non condensing</td>
</tr>
<tr>
<td>Weight</td>
<td>&lt; 3 kg</td>
</tr>
<tr>
<td>Dimensions (LxWxH)</td>
<td>185x85x90 mm</td>
</tr>
<tr>
<td>Power requirements</td>
<td>100-240V, 50/60Hz</td>
</tr>
</tbody>
</table>

### SCM OEM Module Format

**Mechanical/Environmental/Electrical specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control interface</td>
<td>Controller and serial port</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-10°C to +50°C non condensing</td>
</tr>
<tr>
<td>Humidity</td>
<td>80% RH up to 40°C</td>
</tr>
<tr>
<td></td>
<td>60% RH above 40°C</td>
</tr>
<tr>
<td>Weight - Laser module</td>
<td>~1 kg</td>
</tr>
<tr>
<td>Footprint - Laser module</td>
<td>130x85 mm</td>
</tr>
<tr>
<td>Height - Laser module</td>
<td>95 mm (with fan)</td>
</tr>
<tr>
<td>Weight - Controller</td>
<td>&lt; 280 g</td>
</tr>
<tr>
<td>Dimensions (LxWxH) - Controller</td>
<td>115x90x35 mm</td>
</tr>
<tr>
<td>Power requirements</td>
<td>12V, 6A</td>
</tr>
</tbody>
</table>

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**Contact**  
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