SOA Driver

CW or Pulsed
High Speed - High Dynamic range

AeroDIODE

www.aerodiode.com
**SOA Driver**

Do I need a power boost, an optical switch, a full-range VOA or a high dynamic range ns-speed fiber modulator?

SOA (Semiconductor Optical Amplifier) act as multifunctional devices. When used as intensity modulators, they become a smart alternative to AOM (Acousto Optic Modulators) or EOM (Electro Optics Modulators).

**SOA-Std & SOA-HPP**

- When used with key pulsed electronic, SOA is able to act as an optical modulator: it becomes a lossless, low noise, high speed, high dynamic range, high extinction ratio and highly polarizing solution.
- User-set pulsewidth from 0.5 ns to CW: 3 pulse generation mechanisms (internal/external)
- Timing Jitter down to 8 ps; Rep rate up to 250 MHz
- Adjustable safety limits, current levels (average/peak), SOA temperature, etc.
- All versions can be controlled either through USB link or through an analog signal.
- 1 version also includes 3 pulse-delay-generators for external synchronizations [SOA-Shape].
- Many OEM functionalities for integration compatibility - contact us for more information
- Most versions show fast delivery for immediate customer use.
- SOA components from 750 to 1700 nm can be sourced from us or directly from key suppliers.

### Key features

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## Technical Specifications

### Version:

<table>
<thead>
<tr>
<th>Version</th>
<th>CW or Pulsed</th>
<th>Output current (CW regime)</th>
<th>Output current (Pulse regime)</th>
<th>Extinction ratio (dB,typ) (SOA choice dependant)</th>
<th>Switching speed (typ) (SOA choice dependant)</th>
<th>Dynamic Range (up to)</th>
<th>Trigger-to-pulse Jitter</th>
<th>Pulse shaping</th>
<th>CW offset (in pulse mode)</th>
<th>Max repetition rate</th>
<th>Max Output Power (SOA choice dependant)</th>
<th>Interface/compatibilities and Libraries</th>
<th>Operating Voltage (AC/DC converter included)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOA-std</td>
<td>CW or Pulsed</td>
<td>800 mA</td>
<td>1500 mA</td>
<td>&gt;50 dB</td>
<td>~1 ns</td>
<td>60 dB</td>
<td>&lt;20 ps</td>
<td>no</td>
<td>no</td>
<td>10 MHz</td>
<td>From 20 to 100 mW (more than 500 mW have been measured in some pulsed configuration)</td>
<td>USB - Windows 7/10 - DLLs - Hexa - Labview - Python</td>
<td>12 V</td>
</tr>
<tr>
<td>SOA-HPP</td>
<td>CW and/or Pulsed</td>
<td>1000 mA</td>
<td>3500 mA</td>
<td>&gt;40 dB</td>
<td>~2 ns</td>
<td>48 dB</td>
<td>&lt;8 ps</td>
<td>yes</td>
<td>yes</td>
<td>250 MHz</td>
<td></td>
<td></td>
<td>24 V</td>
</tr>
<tr>
<td>SOA-Shape</td>
<td>Pulsed only</td>
<td>1000 mA</td>
<td>1600 mA</td>
<td></td>
<td></td>
<td></td>
<td>&gt;2 ns</td>
<td>no</td>
<td>no</td>
<td>20 MHz</td>
<td>From 20 to 100 mW (more than 500 mW have been measured in some pulsed configuration)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Contact us for technical advices to reach optimal performances

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**Aerodiode multiboard system**

**SOA-Shape GUI Interface**

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