

# SOA Driver

CW or Pulsed

High Speed - High Dynamic range



# ALPHA NOV

Optics & Lasers Technology Center

# 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

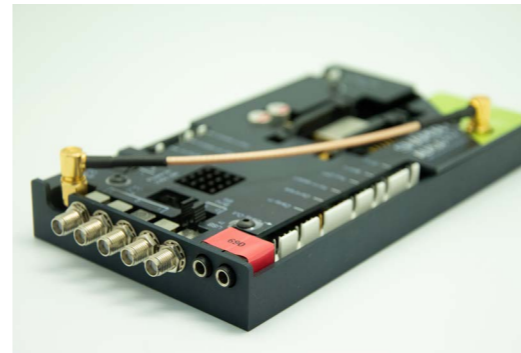


## Key features

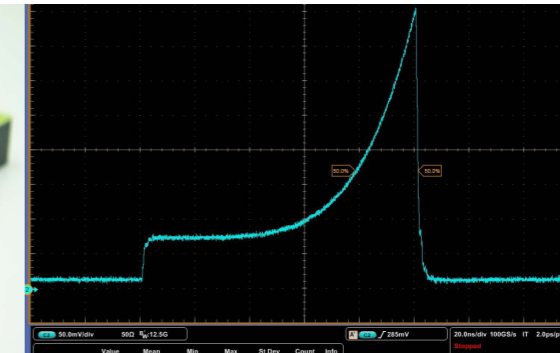
- When used with key pulsed electronic, SOA is able to act as an optical modulator: it becomes a lossless, low noise, high speed, high dynamic range, high extinction ratio and highly polarizing solution.
- User-set pulsewidth from 0.5 ns to CW ; 3 pulse generation mechanisms (internal/external)
- Timing 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.

# Technical Specifications

SOA-Shape



SOA-shape pulse



New! SOA-HPP

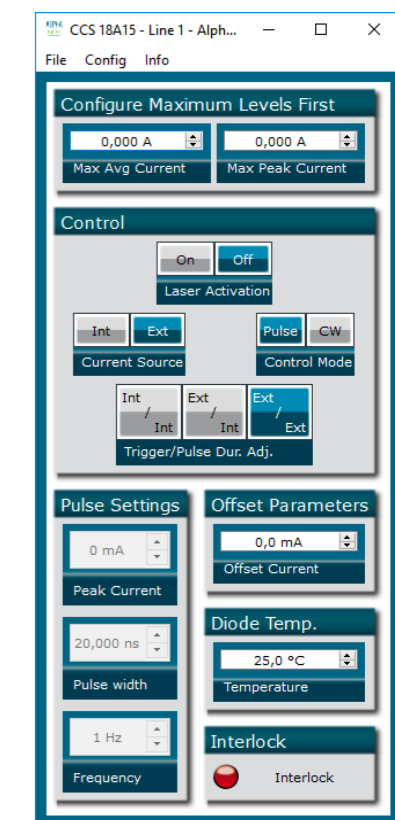


## Specifications

Version:	SOA-std	SOA-HPP (High Pulse Performance)	SOA-Shape (Pulse shaping)
<b>CW or Pulsed ?</b>	CW or Pulsed	CW and/or Pulsed	Pulsed only
<b>Output current (CW regime)</b>	800 mA	2000 mA	-
<b>Output current (Pulse regime)</b>	1500 mA	4000 mA	1600 mA
<b>Extinction ratio (dB,typ) (SOA choice dependant) <sup>(1)</sup></b>	>50 dB		>40 dB
<b>Switching speed (typ) (SOA choice dependant) <sup>(1)</sup></b>	~1 ns	~0.5 ns	~2 ns
<b>Dynamic Range (up to) <sup>(1)</sup></b>	60 dB	60 dB	48 dB
<b>Trigger-to-pulse Jitter</b>	<20 ps	<8 ps	<2 ns
<b>Pulse shaping</b>	no	no	yes
<b>Max repetition rate</b>	10 MHz	250 MHz	20 MHz
<b>Max Output Power (SOA choice dependant) <sup>(1)</sup></b>	From 20 to 100 mW (more than 500 mW have been measured in some pulsed configuration)		
<b>Interface/compatibilities and Libraries</b>	USB - Windows 7/10 - DLLs - Hexa - Labview - Python		
<b>Dimensions</b>	130*110*29	170*107*27.5	162*92*27
<b>Operating Voltage (AC/DC converter included)</b>	12 V	24 V	24 V

<sup>(1)</sup>Contact us for technical advices to reach optimal performances

## SOA-std GUI Interface





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