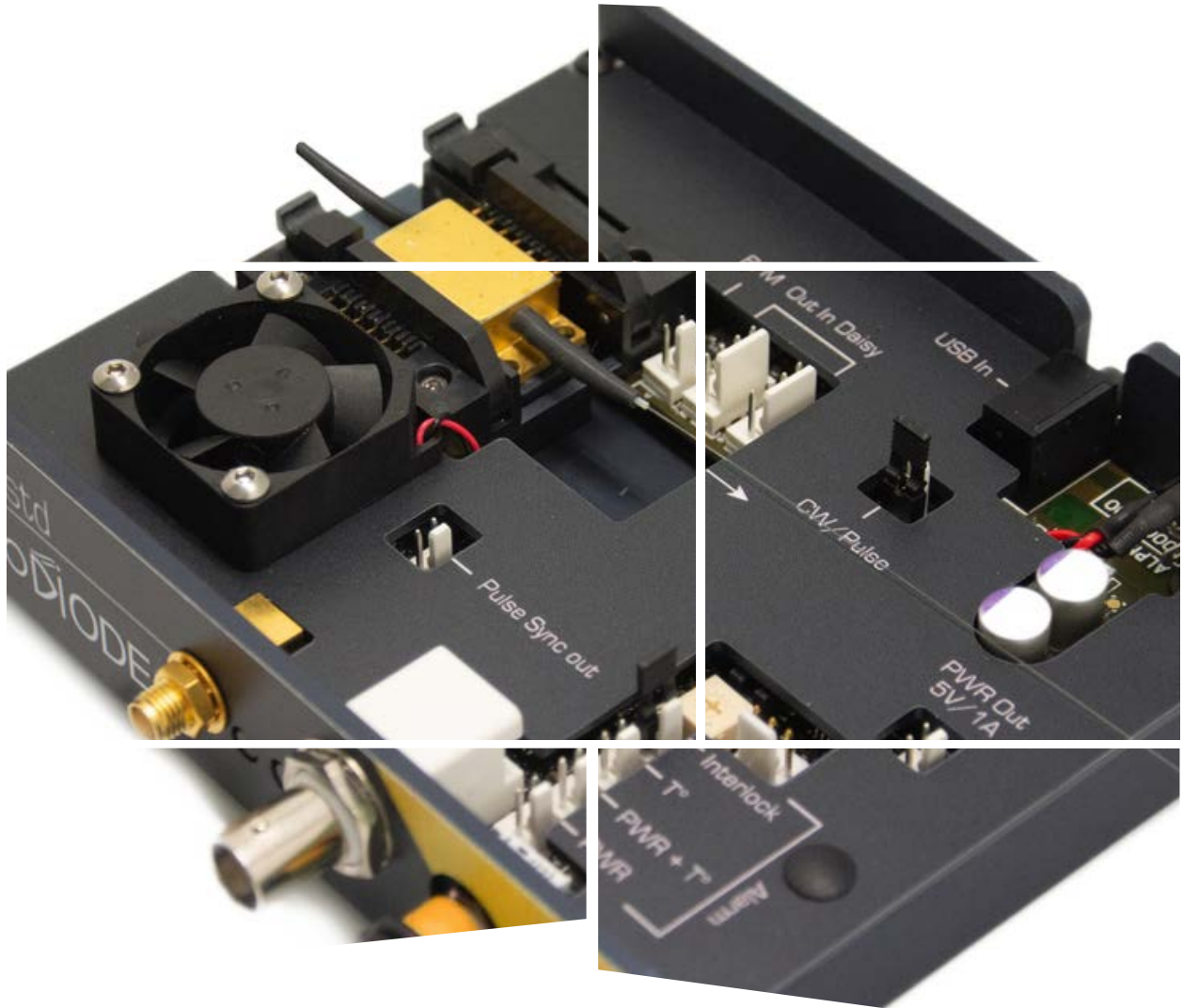# SOA/BOA Driver

SOA (Semiconductor Optical Amplifier) Driver for amplification in CW mode
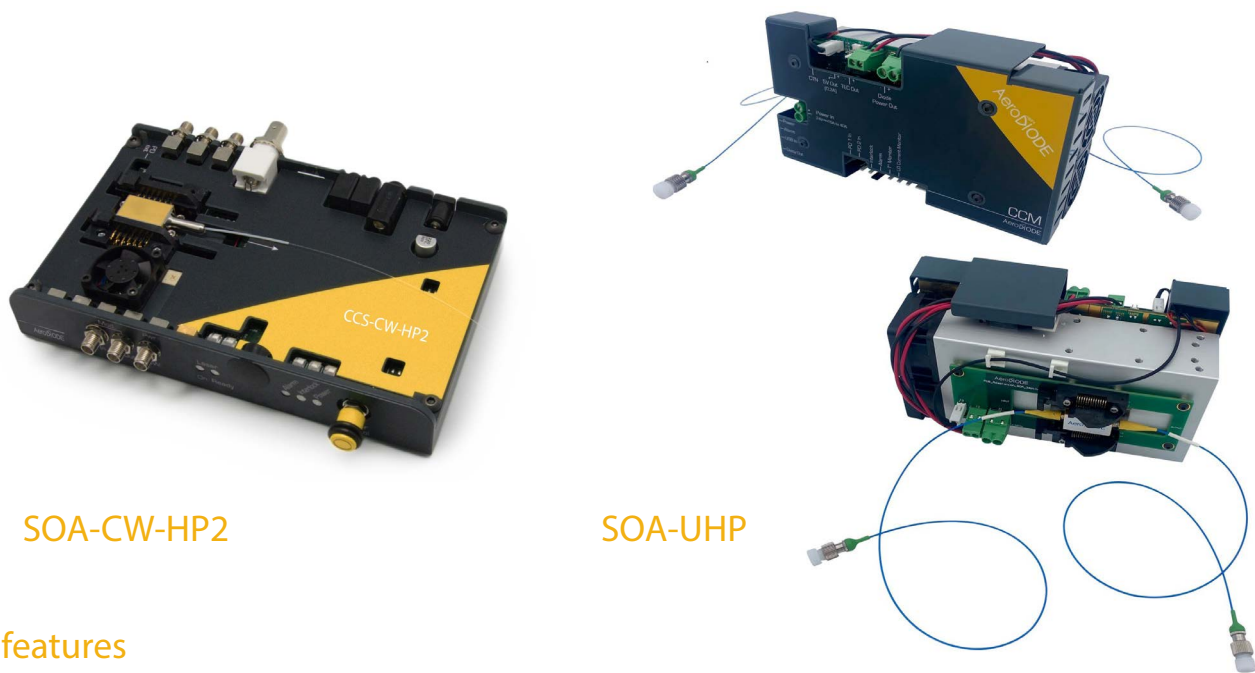
SOA/BOA Driver

SOAs (Semicondutor Optical Amplifiers) are designed to amplify light in a single pass without a laser cavity, with one input fiber and one output fiber. They include an SOA chip with a TEC cooler and a thermistor.

The 4 SOA driver models offered here allow you to control simultaneously the current level applied to the SOA and the temperature of the SOA/BOA chip. Special mounting sockets allow quick replacement of SOA components.

SOA-CW-HP2

SOA-UHP

Key features

- Compatible with any SOA with butterfly form factor on the market
- Integrated TEC controller
- All models have a 0-100% current adjustment range with high resolution
- All version include a GUI control software and a wide choice of libraries for software integration (DLLs, LabVIEW, Python, Hexa etc.)
- All versions can be controlled either through USB link or through an analog signal.
- SOA components from 750 to 1700 nm can be sourced from us or directly from key suppliers.
- The integrated SOA protection circuits protect your device under test at all times. A user sets the current limit and a special temperature protection clamp both the bias current and the operating temperature. A soft-start current ramp protects the SOA from the possibility of thermal shock or current surges. A special starting mode is available to avoid the need of using a computer for photonics system integration.
- Another special product page is dedicated to SOA drivers for pulse/modulation operation.
- Depending on your country, AeroDIODE will ship your order from the USA or Europe
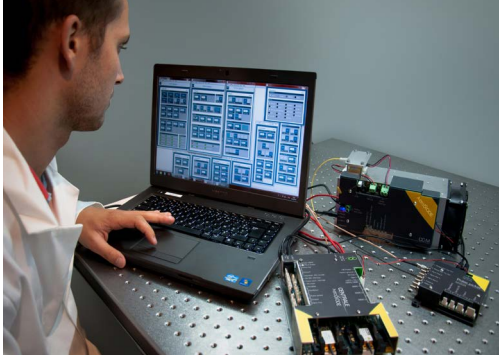
Technical Specifications

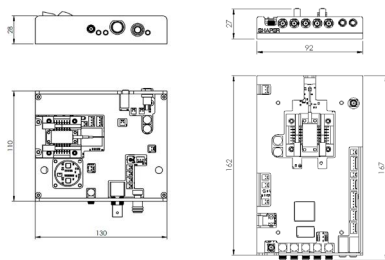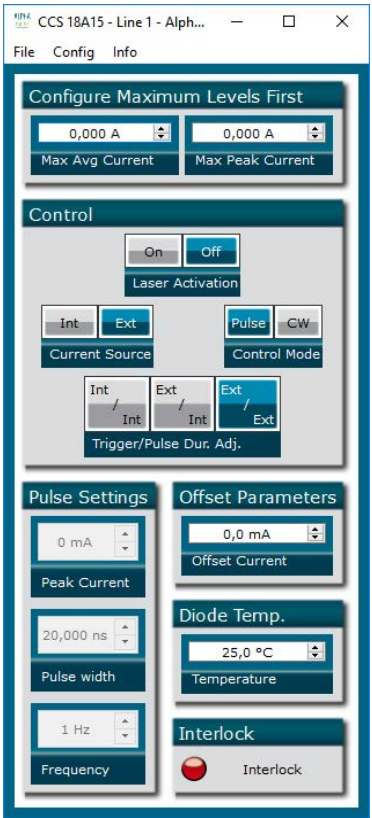Touch screen/mounting set (optional*)

SOA-Std

AeroDIODE multiboard system

*All products include a GUI software and a choice of software libraries

Specifications

Version:	SOA-CW	SOA-CW-HP2	SOA-UHP	SOA-std
CW or Pulsed ?	CW	CW	CW or pulsed	CW or Pulsed
Max output current (CW regime)	800 mA	1800 mA	5000 mA	800 mA
Output current (Pulse regime)	na	na	5000 mA	1500 mA (3500mA on demand)
Extinction ratio (dB,typ) (SOA choice dependant)	>70 dB			
Switching speed (typ) (SOA choice dependant)	na	na	5 µsec	< 1 ns
Dynamic Range (up to) [1]				
SOA chip T° (TEC) regulation	15-50 ℃	0-90℃	15-50℃	15-50 ℃
Temperature stability (typ.)	<10 mK	<1 mK	<10 mK	<10 mK
TEC current/voltage (up to)	±1.5 A/3.8 V	±3 A/4.6 V	±8 A/24 V	±1.5 A/3.8 V
CW offset (in pulse mode)	na	na	no	yes
Max repetition rate	na	na	100 kHz	250 MHz
Max Output Power (SOA choice dependant)	23 dBm	26 dBm	30 dBm	23 dBm
Interface/compatibilities and Libraries	USB - Windows 7/10 - DLLs - Hexa - Labview - Python			
Operating Voltage (*AC/DC converter included)	12V*	24V*	24 V	12V*

SOA-std GUI Interface

CCS 18A15 - Line 1 - Alph...

File   Config   Info

Configure Maximum Levels First

0,000 A   0,000 A

Max Avg Current   Max Peak Current

Control

On   Off

Laser Activation

Int   Ext   Pulse   CW

Current Source   Control Mode

Int   Ext   Ext
Int   Int   Ext

Trigger/Pulse Dur. Adj.

Pulse Settings   Offset Parameters

0 mA   0,0 mA

Peak Current   Offset Current

20,000 ns   Diode Temp.

Pulse width   25,0 °C
Temperature

1 Hz   Interlock

Frequency   Interlock

AeroDiODE