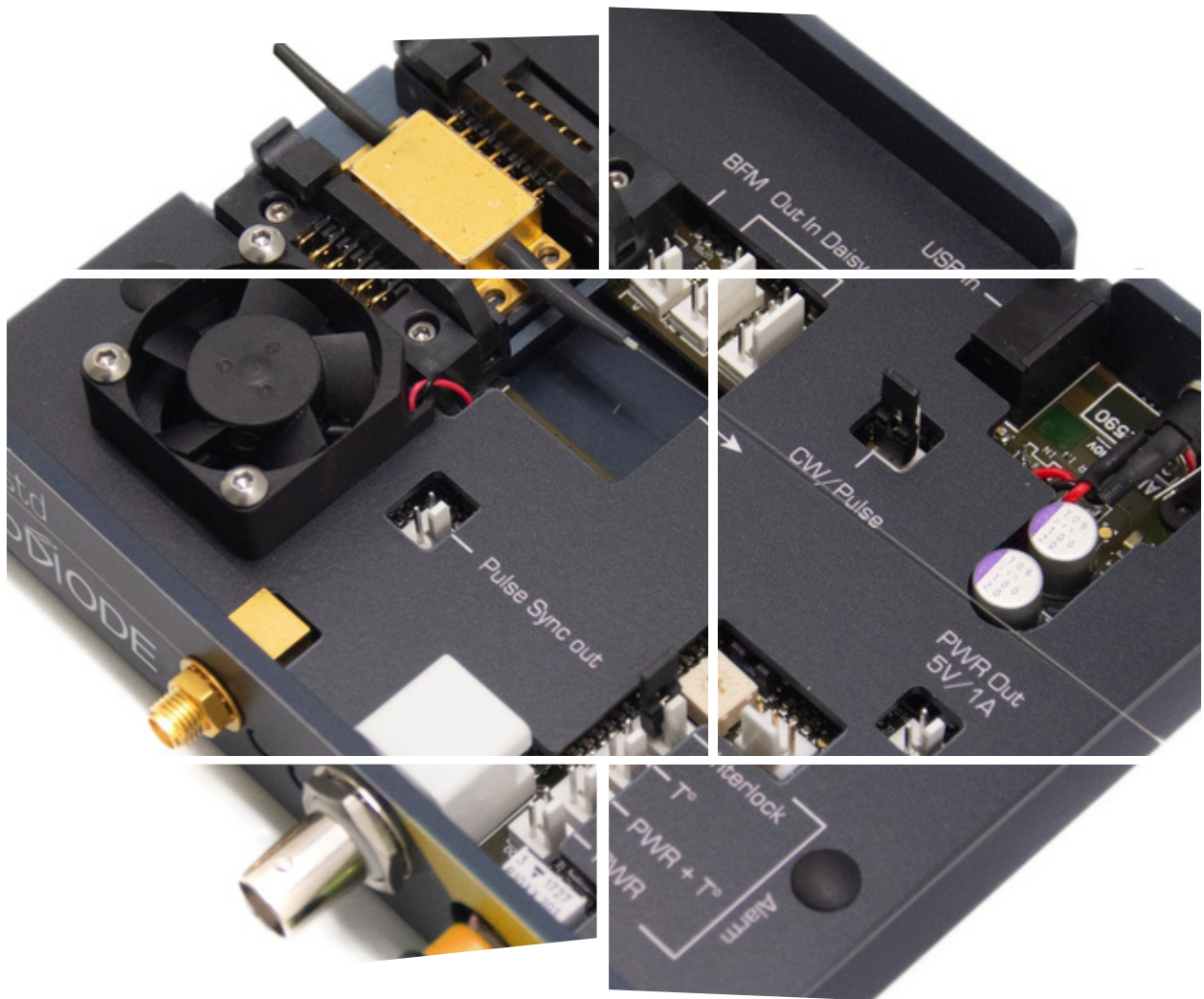


SOA : Semiconductor Optical Amplifiers & turn-key solutions



Aero DiODE

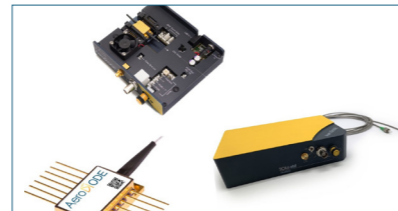
Semiconductor Optical Amplifier

Choose your own fiber-coupled SOA + turn-key driver solution

SOAs are offered as stock items or associated with a low-noise CW or various high-speed pulsed drivers. An SOA driven in CW or pulse mode operates as a full-range variable optical attenuator, lossless high dynamic range amplitude modulator or isolation switch.

1st

Choose your SOA Module :



Model	Wavelength range	Max Power (CW / Pulse)*	Small signal gain*	Operating current (CW/Pulse mode)	Noise Figure	3dB Gain bandwidth (typ.)*	Extinction ratio* (Pin=-25 dBm)**	Package (mm)
1	750-796 nm	18/23 dBm	32 dB	250 / 1000 mA	6.5 dB	15 nm	75 dB	14 pin Butterfly-type 1 - (L=36.5 mm) (cf module datasheet)
2	1000-1100 nm	20/23 dBm	33 dB	400 / 1000 mA	5.0 dB	90 nm	75 dB	
3	1270-1330 nm	18/20 dBm	30 dB	500 / 1000 mA	7.0 dB	60 nm	75 dB	14 pin Butterfly-type 1 - standard (L=30 mm) - cf module datasheet
4	1520-1580 nm	18/20 dBm	25 dB	500 / 1000 mA	8.0 dB	40 nm	75 dB	

* Typical values ; ** contact us to suggest how to optimise the extinction ratio

3rd

Choose your product form factor : OPEN-FRAME or INTEGRATED

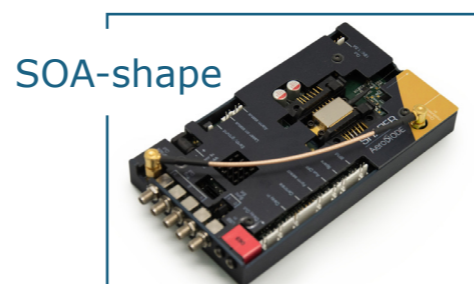
OPEN-FRAME VERSIONS :



SOA-CW
➤ Open-frame CW driver optimized for all types of SOAs.



SOA-std
SOA-HPP
➤ Open-frame pulse & CW driver with optimal performances down to 1 ns in ON/OFF regime with adjustable peak current level and pulse width.



SOA-shape
➤ Open-frame driver with an embedded AWG (Arbitrary Waveform Generator) for ns temporal pulse shaping.

INTEGRATED VERSIONS :

SOAI-CW
SOM-std/SOM-HPP



➤ Integrated version for CW, std and HP electronics Boards.

SOM-SHAPE



➤ Integrated version for Shaper electronics Board.

2nd

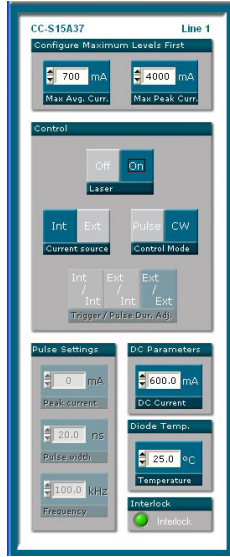
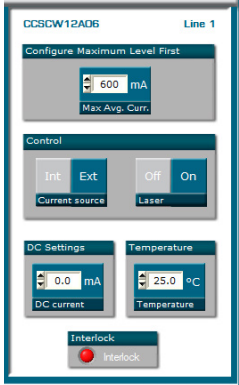
Choose your Driver performance :

SOA DRIVER VERSION :

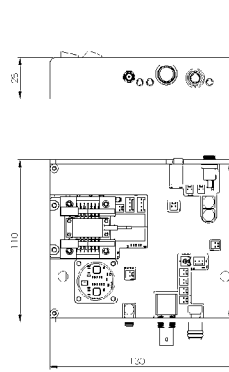
	CW SOA Driver	Pulse & CW SOA Driver (from 1 ns to CW)-		Pulse SOA driver with user-design pulse shape
		Standard version : «SOA-std» is the open driver and «SOM-std» is the integrated version.	High Pulse Performance version : «SOA-HPP» is the open driver and «SOM-HPP» is the integrated turn-key version.	
«SOA-CW» is the open driver and «SOAI-CW» is the integrated version				
Max current CW / Pulse (Note : for integrated versions, the max levels are set according to the SOA nominal levels)	800 mA (CW only) (1500 mA optional)	800 mA (CW) / 1500 mA (Pulse)	800 mA (CW) / 3500 mA (Pulse)	1600 mA (pulse)
User design Pulse shape	No (CW only)	No (On/Off only)		YES
SOA Chip T° regulation range	15 - 50 °C			
Pulse duration (Ext trigger)	CW only	0.5 ns - CW		0.5 ns - 8 µs
Pulse duration (Internal pulse generator)		0.5 ns - 500 ns		
Typ rise/fall time ; Typ min pulse duration		<3 (ns/A) ; 1.5 ns		< 1ns/A ; 1.5 ns
Internal rep rate adjustment		1 Hz - 10 MHz	1 Hz - 250 MHz	1 Hz - 20 MHz
Temporal Jitter		< 35 ps	< 15 ps	< 2 ns (optional internal clock synchronization with 10 MHz external clock to reduce the Jitter level)
Adj. CW offset (pulse regime)	No	Yes	No	
Software Libraries	Hexa, DLLs, LabVIEW, Python; Linux Compatible...			

Technical Specifications

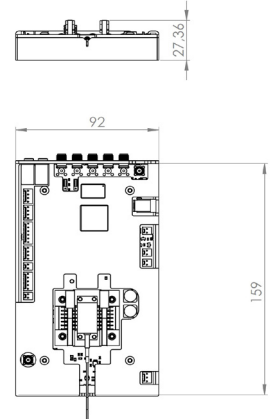
GUI (examples)



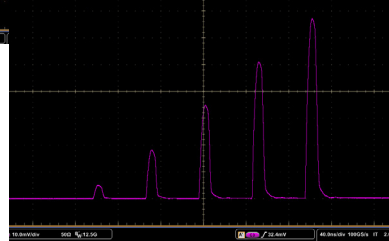
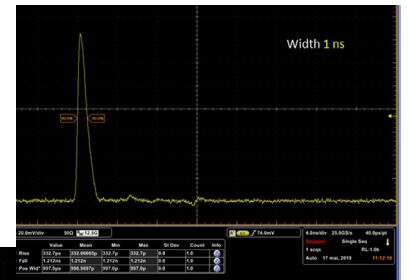
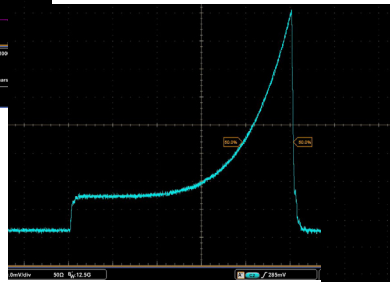
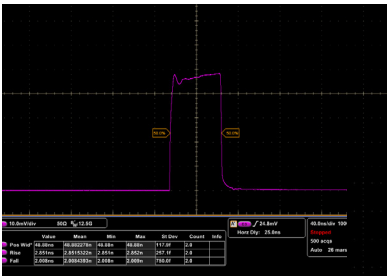
Mechanical (examples) :



CW & Pulsed



SHAPER



Classification :

Name	SOA
SOA type	1: 785 nm 2: 1030/1053/1064 nm 3: 1310 nm 4: 1550 nm
Driver Electronics :	0 : No driver (SOA butterfly module only) 1: CW (CW laser emission driver) 2: Pulse & CW (standard version) 3 : Pulse & CW (High pulse performance version) 4 : SHAPER (User design temporal pulse shape driver) LN : Ultra-low noise CW driver (contact us)
Form Factor	0 : No driver (SOA only) 1: Open frame 2: Integrated turn-key version,

Ordering information :

