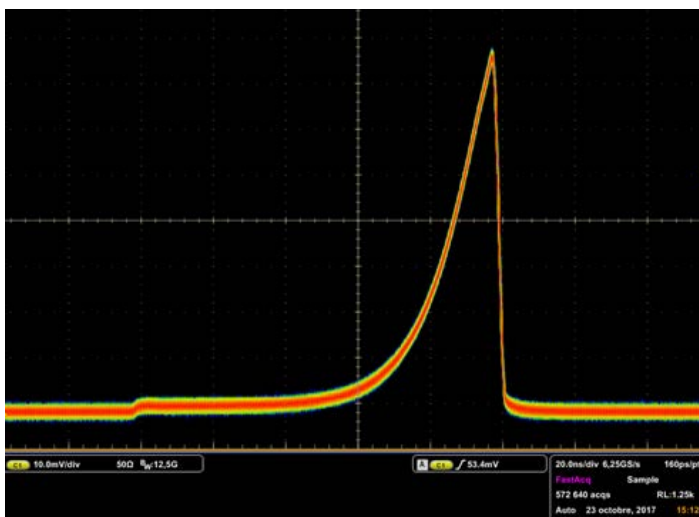
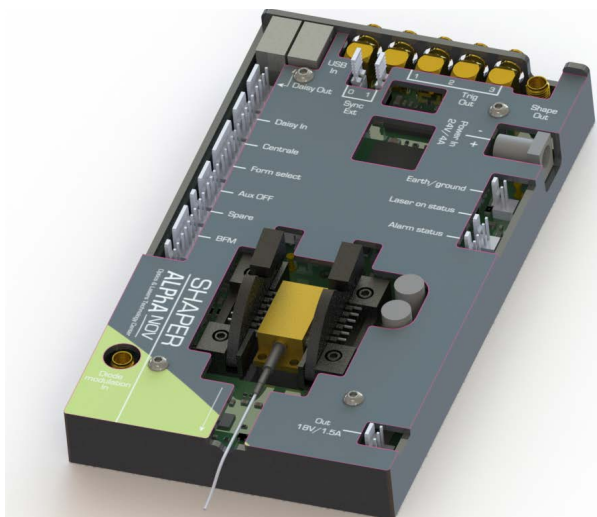


LASER DIODE DRIVER FOR PRECISION PULSE SHAPING

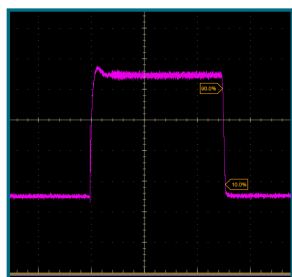
Laser diode driver to generate any Pulse Shape with ns pulse duration. It is a multifunctional unit with integrated AWG (Arbitrary Waveform Generator), TEC controller & multiple Pulse Delay Generators for signal synchronization.



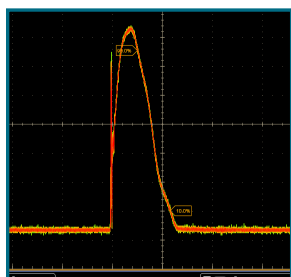
100 ns exponential pulse shape

Key features:

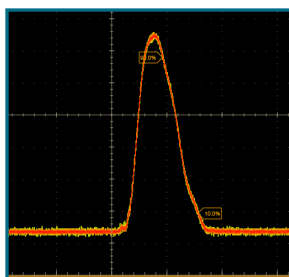
- Direct modulation of ns laser pulses with any shape
- 0 to 2 A output current with 16 bit/48 dB/30 μ A resolution
- Integrated pre-configured mounting sockets for type 1 butterfly laser diode (type 2 on request)
- User set pulse shape from 500 ps to 2 μ s with 0 - 250 MHz repetition rate
- Integrated TEC controller with over temperature protection
- Special mode for laser diode "gain switch peak" suppression
- Built-in pulse AWG with internal or remote triggering
- Integrated Pulse Delay Generator
- USB interface with intuitive GUI software
- Available in two versions direct or external modulations



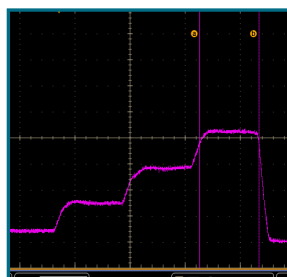
1 A, 100 ns square pulse



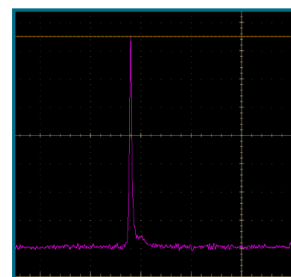
1.5 ns pulse



1.5 ns pulse with activated "gain-switch peak suppression" function



400 mA, 100 ns step wave pulse



80 ps stable gain-switch pulse

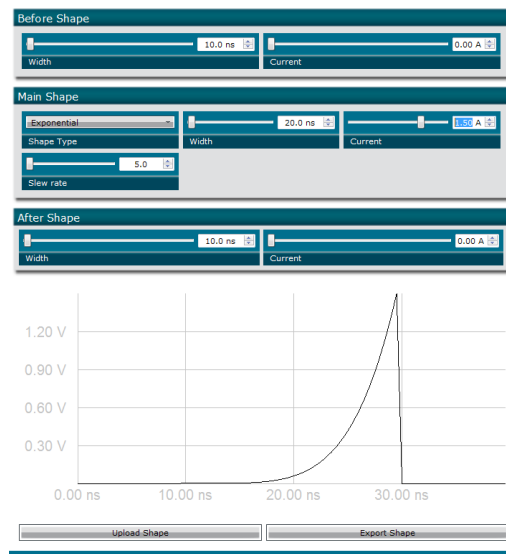
TECHNICAL SPECIFICATIONS

	Characteristics	Min	Max
Laser diode pulse shaping (direct modulation)	Peak current level	0	2 A
	Pulse shaping duration	500 ps	2 μ s
	Pulse shaping timing resolution	-	500 ps
	Pulse shaping current resolution	-	30 μ A
Laser diode pulse shaping (external modulation)	Original pulse peak current level	0	4 A
	Original pulse timing resolution (delay/pulse-width)	-	1 ns
	EOM/AOM* pulse shaping duration	500 ps	2 μ s
	EOM/AOM* pulse shaping timing resolution	-	500 ps
	Output voltage (factory configuration)	-	1 V (50 Ohm) / 5 V (High-Z)
Electrical synchronization (Pulse Delay Generator) outputs	Number of outputs	-	3
	Synchronization signals duration	0	10 ⁹ ns
	Synchronization signals resolution	-	1 ns
	Output voltage	0	3.3 V (50 Ohm)
General	Compatibilities & Libraries	Win XP/7/10 - DLLs - UART protocol	
	Interface	USB or UART	
	Power supply	24V/4A (110 V/220 V adapter included)	

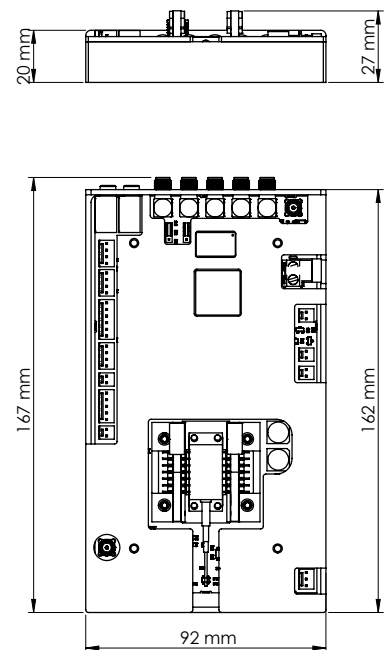
GUI control software:

The GUI control software interface includes several panels:

- PDM:** Controls for Current (0.00 A), Offset (0.00 A), Temperature (25.00 °C), and Laser Activation (On/Off).
- Shapes:** Selection of Shape 1-4, a Default Value input (0), and the ALPhA NOV logo.
- Synchronisation:** Settings for External KK, Trigger Source A/B, Delay A/B (100 ns), Sequence A/B, and Synchro A Frequency (10000 Hz).
- Measures:** Real-time monitoring of Main Voltage (23.558 V), Diode temperature (25.04 °C), and PD_MOY Power (0.000 W).
- Alarms:** Status indicators for Diode T°C, Mean Curr., Main Voltage, AUX OFF, Avg. Power, and Elec. Temp.

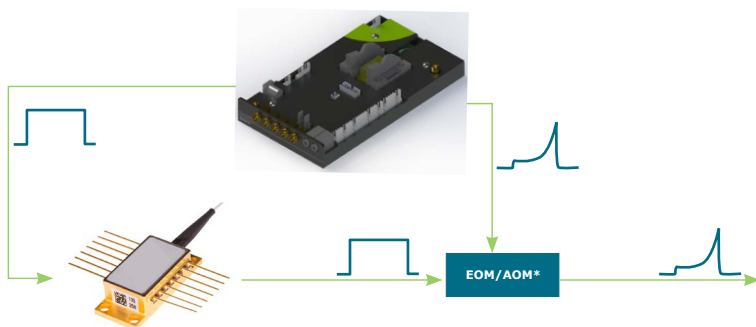


Mechanical:



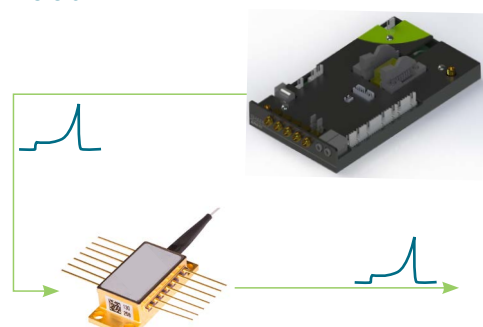
External modulation

version 1



Direct modulation

version 2



* Electro Optic Modulator / Acousto Optic Modulator