



DL nSec

Diode Laser with Sub Nanosecond Modulation

Key features

- rise and fall time < 1 ns
- short pulse feature with 300 ps FWHM
- variable pulse width from sub-ns to cw
- On/Off ratio > 90 dB
- small form factor
- easy-to-use USB interface
- stand-alone operation with internal auto-trigger

Exemplary **specifications** for a 520 nm diode with 40 mW output power:

Switching characteristics

Rise and fall time	< 1 ns
Max. repetition rate	> 125 MHz
On/Off ratio	> 90 dB

Digital inputs and outputs

PULSE IN	SMA, 50 Ω terminated
PULSE IN trigger level	1.4 V
SYNC OUT	SMA, 50 Ω matched
SYNC OUT high level	1.25 V on 50 Ω
SYNC OUT rise and fall time	< 2 ns

Internal auto-trigger mode

Minimum pulse duration	50 ns
Repetition rate	up to 62.5 kHz

Driver parameters

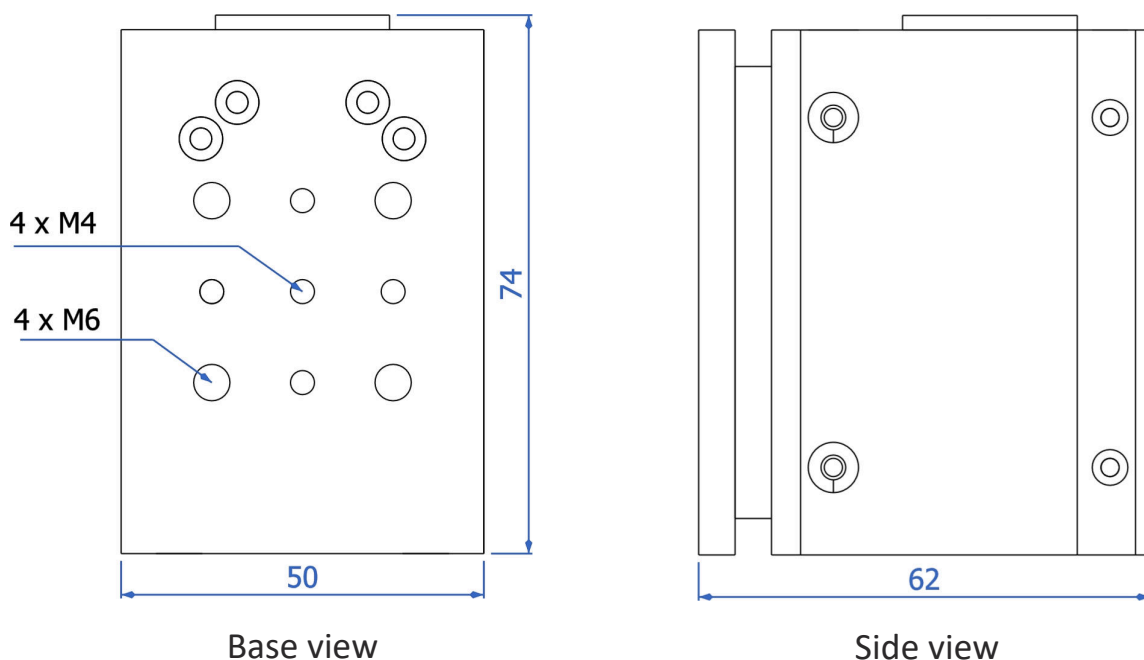
Laser diode current	1-300 mA
Power supply	7.5 V, 800 mA, 2.1mm jack plug-in power supply

Control interface

Connector	USB mini type B
Software driver	driver already included in the OS
Communication protocol	serial, plain text

Mechanical parameters

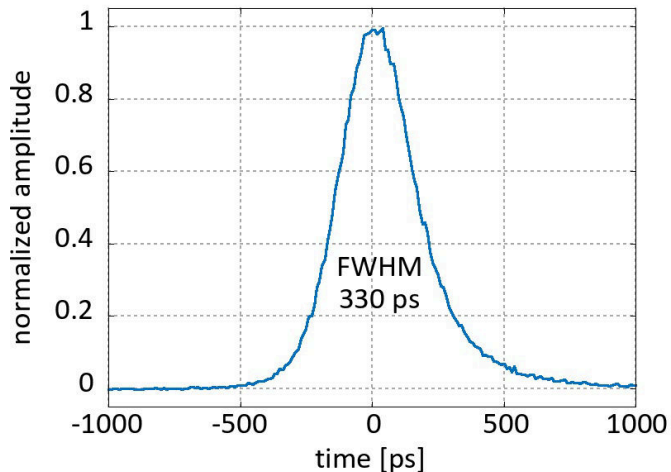
Housing	anodized aluminum
Base	aluminum
Mount options	M4, M6, mounting groove
Dimensions (L x W x H)	74 x 50 x 62 mm



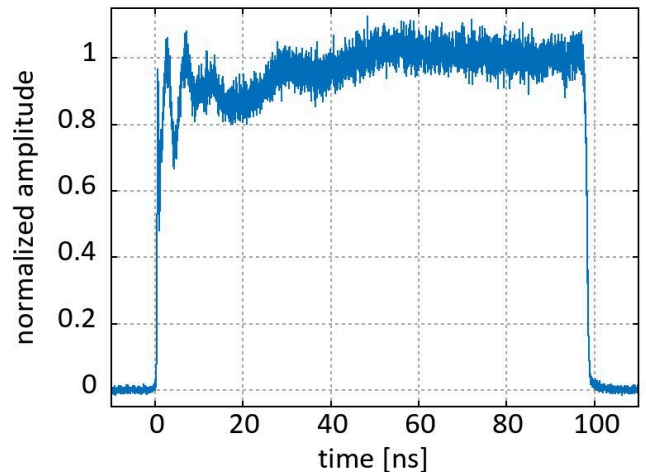
Typical pulse characteristics

Conditions: 520 nm diode, 40 mW output power, external trigger

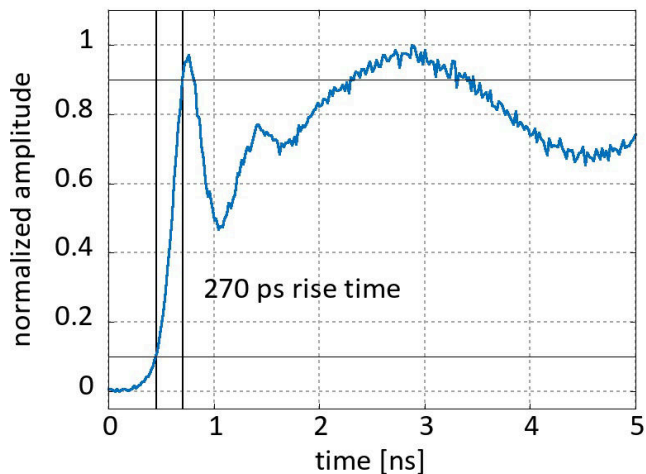
Sub-nanosecond pulse



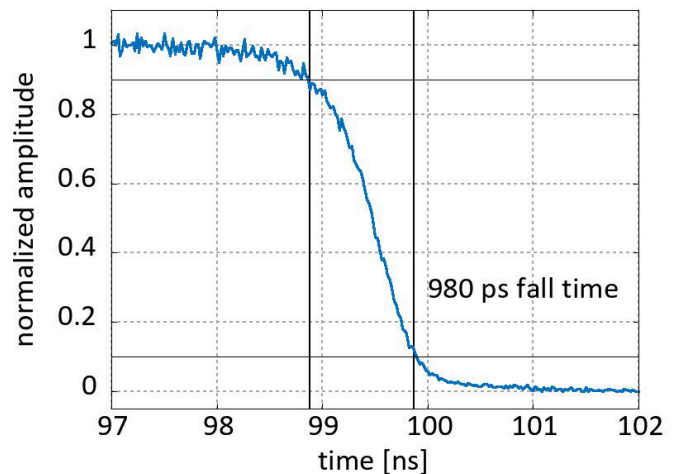
Typical pulse response



Rise time



Fall time



Available laser diodes (not all listed):

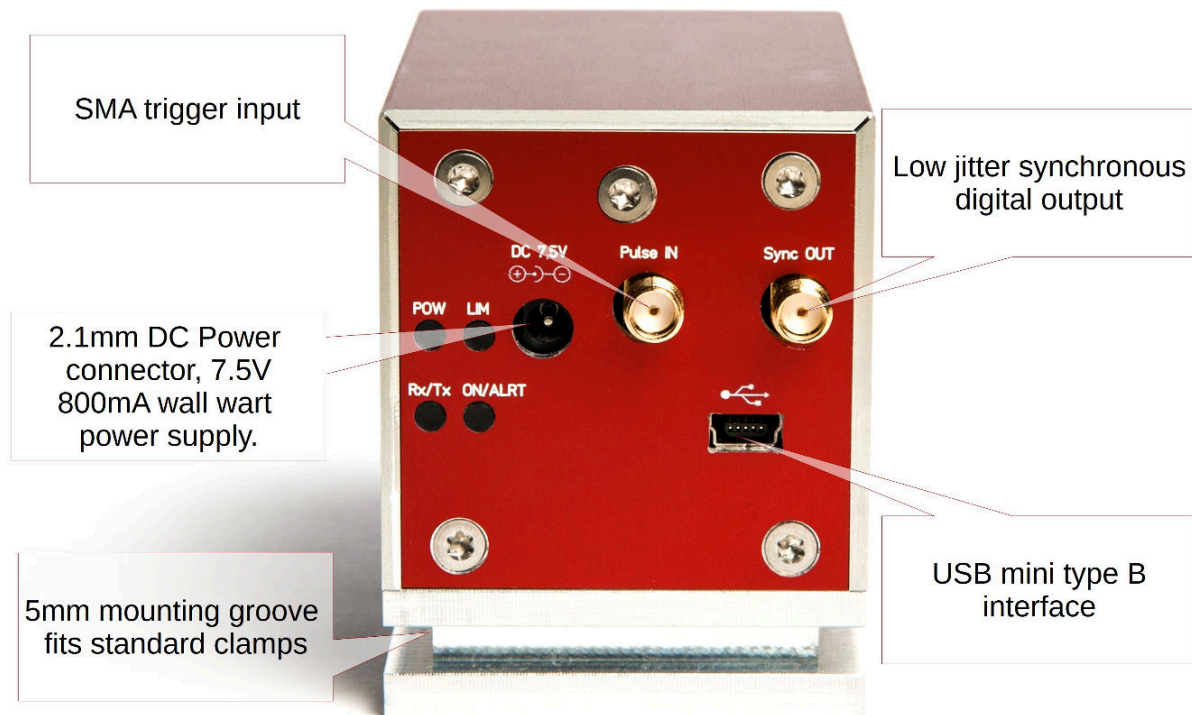
MODEL	WAVELENGTH	POWER (CW)
PE 405	405 nm	30 mW
PE 520	520 nm	40 mW
PE 633	633 nm	80 mW
PE 637	637 nm	90 mW
PE 638	638 nm	30 mW
PE 642	642 nm	60 mW
PE 658	658 nm	30 mW
PE 670	670 nm	10 mW
PE 705	705 nm	40 mW
PE 730	730 nm	40 mW
PE 808	808 nm	125 mW
PE 852	852 nm	35 mW

Please request a quotation for your required wavelength, even if not listed here.

Sub Nanosecond Diode Laser

Small, easy to interface, reliable.

Convenient control interface and powering



Your investment in a DL nSec

- diode laser with sub nanosecond modulation
- compact design
- short pulse feature

Send an email to sales@swabianinstruments.com to get a quotation or to place a purchase order.