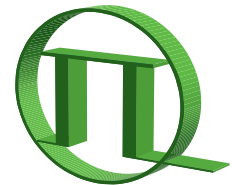


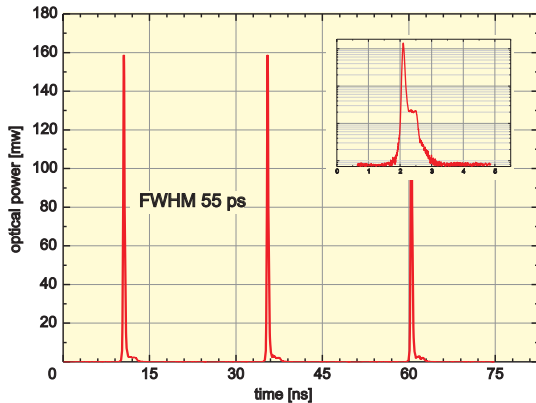
PDL 200-B



PICOQUANT
Unternehmen für optoelektronische
Forschung und Entwicklung

Pulsed Diode Laser Driver

<http://www.picoquant.com>



- Easy selectable repetition rates of 8, 4, 2, 1 and 0.5 MHz
- Laser pulse energy adjustable via driver unit
- Laser heads from 375 to 1550 nm, LED heads from 255 to 600 nm
- External trigger / Sync output



Applications

- Time-resolved fluorescence spectroscopy
- Single Molecule Spectroscopy (SMS)
- Test and measurement of detectors and optical fibers
- Diffuse Optical Tomography (DOT) of biological tissue
- Confocal microscopy
- Stimulated Emission Depletion (STED) microscopy
- Materials research
- Quantum optics

Picosecond Pulsed Diode Laser Driver

The PDL 200-B is a stand-alone driver for the picosecond pulsed laser diode heads from 375 to 1550 nm (LDH-P Series) as well as for the sub-nanosecond pulsed LEDs from 255 to 600 nm (PLS Series). The laser heads can emit light pulses as short as 70 ps FWHM (50 ps on selection) with peak powers up to 1 Watt (depending on wavelength). The PDL 200-B features easy-to-use controls for repetition frequency and laser pulse energy. Wavelengths can be changed quickly by simply plugging in a different laser or LED head.

User-selectable repetition frequencies of 8, 4, 2, 1 and 0.5 MHz are derived from the internal crystal oscillator that generates a low jitter base frequency. Laser pulses can also be triggered by an external trigger input so that the PDL 200-B can be synchronized with other instruments over the full frequency range. A synchronization output allows to trigger other components such as TCSPC electronics.

Besides the PDL 200-B, four other drivers of the PDL family are available:

- PDL 800-B - single-channel driver with internal repetition rates up to 80 MHz and external trigger input
- PDL 800-D - single-channel driver with repetition rates from 32.5 kHz to 80 MHz, pulsed and cw operation
- PDL 808 "Sepia" - modular, multi-channel driver for up to 8 laser or LED heads
- PDL 828 "Sepia II" - modular, high-end computer controlled multi-channel driver for up to 8 laser or LED heads

Picosecond pulsed diode laser modules are also available in OEM quantities for system suppliers. These compact, cost-effective diode lasers with fixed parameters (repetition frequency, output power and wavelength) can easily be integrated into complex systems.

Pulsed Light Sources



LDH-P Series
Picosecond pulsed
laser diode heads

Available wavelengths: 375 - 485 nm, 635 - 1550 nm, options: peltier cooled, high power version, narrow spectral bandwidth, selected short pulses, fibre coupling to single-mode and multi-mode optical fibres



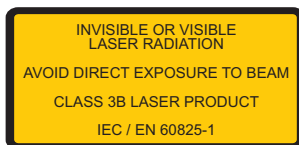
PLS Series
Sub-nanosecond
pulsed LEDs

Available wavelengths: 255 - 600 nm, options: spectral bandpass filter



For all available types and wavelengths please go to:

<http://www.picoquant.com/products/ldh/ldhseries.htm>
<http://www.picoquant.com/products/pls/plsseries.htm>



Specifications

Internal Oscillator

Type Crystal locked
Master frequency 8 MHz
Repetition frequencies 1, 1/2, 1/4, 1/8, 1/16 of base frequency
8, 4, 2, 1 or 0.5 MHz

External Trigger Input

Amplitude -5 to +5 V (maximum limits)
Trigger level (adjustable) ... -1 to +1 V (negative slope)
Pulse width >5 ns
Frequency range 10 Hz to 8 MHz
Delay 35 ± 5 ns (from trigger input
to optical output), jitter <40 ps
Impedance 50 Ohms (dynamic)
..... >500 Ohms (static)
Connector type BNC (female)

Synchronization Output

Amplitude < -800 mV into 50 Ohms (NIM)
Pulse width 6 ns
Delay 12 ns (from falling edge to
laser output), jitter <20 ps
Impedance 50 Ohms
Connector type SMA (female)

Remote Interlock

Voltage <7 VDC
Loop resistance 10 Ohms max.

Power Supply

Line voltage 220/240 or 110/120 VAC, 50/60 Hz
Power consumption 45 Watts max.

Dimensions

Driver unit 237 × 310 × 97 mm (w × d × h)

Temperature Range 10 - 40 °C

Further available are Fluorescence Lifetime Spectrometer; Time-resolved Fluorescence Microscopes; Upgrade kit for Laser Scanning Microscopes; Picosecond / Nanosecond Pulsed, Modulated Diode Lasers; PC Modules for TCSPC. Please call for detailed information and data sheets. OEM Modules of all products are available upon request. **Please check our website for latest changes of specs.**

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