

# Press Release

For immediate release  
15 July 2011



## **New picosecond pulsed diode lasers at 500 nm and 510 nm by PicoQuant**

**The new green lasers open the door for new applications in Life and Material Sciences**

**Berlin (Germany), 15 July 2011** – PicoQuant GmbH announces the release of the long-awaited 500 nm and 510 nm picosecond pulsed diode laser heads. For the first time, green laser emission is not generated by wavelength conversion techniques, but directly generated by a semiconductor laser diode. The availability of the new wavelengths opens the door for entirely new applications in bioanalytics, biochemistry, genetics, semiconductor characterisation and quality control.

The laser heads are ideal for exciting fluorescent proteins like EYFP, mCitrine or Venus and widely used fluorescent dyes such as Alexa 514, Atto 520 or Oregon Green. They also fill an urgent demand for alternatives to frequency doubled solid state lasers or argon-ion lasers in applications like Fluorescence Microscopy. With pulse durations as short as 130 ps, the pulsed laser heads perfectly match the time resolution of mainstream detectors, yet at a price much lower than that of commonly used mode-locked lasers. The two laser heads are also available in a dual mode version, that allows picosecond pulsed as well as continuous-wave operation.

Visitors of the Photonics West exhibition in San Francisco in January 2011 and of the LASER World of PHOTONICS exhibition in Munich in May 2011 already had the chance to see the laser heads as technology previews at PicoQuants booth. With the official release of the new models, the PicoQuant diode laser family “LDH Series” now covers the entire wavelength range from 375 nm to 1990 nm. All laser heads come with collimator optics that can optionally be fitted with optical fibers. The new 500 nm and 510 nm laser heads are compatible with PicoQuants family of diode laser drivers “PDL Series”.

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## Technical Data

### LDH-P-C-510

Center Wavelength 510 nm  $\pm$  10 nm

Repetition rate from single shot to 40 MHz

Pulse width < 130 ps (FWHM) at average power 0.3 mW at 40 MHz repetition rate

Pulse width < 600 ps (FWHM) at average power 2.0 mW at 40 MHz repetition rate

Average output power in continuous-wave mode: 10 mW

### LDH-P-C-500

Center Wavelength 500 nm  $\pm$  10 nm

Repetition rate from single shot to 40 MHz

Pulse width < 130 ps (FWHM) at average power 0.5 mW at 40 MHz repetition rate

Pulse width < 500 ps (FWHM) at average power 2.0 mW at 40 MHz repetition rate

Average output power in continuous-wave mode: 5 mW

For further details see also <http://www.picoquant.com/ldh/ldhseries.htm>

## About PicoQuant

PicoQuant GmbH is a research and development company in the field of optoelectronics. The company was founded in 1996 and is based in the science and technology park Berlin-Adlershof, Germany. The company is a worldwide leader in the field of single photon counting applications. The product line includes pulsed diode lasers and LEDs, photon counting instrumentation, fluorescence lifetime spectrometers and time-resolved confocal microscopes. PicoQuant employs currently around 50 people. Since April 2008 Sales and Support in North America is handled by PicoQuant Photonics North America Inc.

## Attachment

Picture of the green picosecond pulsed laser heads

Caption: The new green laser heads fill a demand for alternatives to frequency doubled solid state lasers or argon-ion lasers.

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