

Product Release Note

New Aqua Marine (470 nm) Picosecond Pulsed Diode Laser from PicoQuant

PicoQuant GmbH announces the release of the long-awaited 470 nm picosecond pulsed diode laser. The availability of this new wavelength opens the door for entirely new applications in bioanalysis, biochemistry, genetics, optical storage, semiconductor characterisation and quality control. The new laser is also ideal for exciting fluorescent proteins and widely used fluorescent dyes such as rhodamine, fluorescein, acridine orange, and their derivatives. With pulse durations as short as 90 ps, the pulsed laser perfectly matches the time resolution of mainstream detectors, yet at a price ten times lower than that of commonly used mode-locked lasers. The new light source also fills an urgent demand for solid-state alternatives to argon-ion lasers in some applications. The PicoQuant diode laser family now covers the wavelength range from 375 to 470 nm and from 635 to 1500 nm. All of the laser heads come with collimator optics that can optionally be fitted with optical fibres. The new laser head is compatible

with the PicoQuant PDL 800-B (one channel) and PDL 808 "Sepia" (multi-channel) diode laser drivers, which can run at a maximum frequency of 40 MHz. PicoQuant GmbH is the world's leading manufacturer of picosecond diode lasers, covering a rapidly growing section of the time-resolved fluorescence research market.

Technical Data

Center Wavelength 470 nm \pm 10 nm
Spectral width 7 nm (FWHM) typ.
Repetition rate from single shot to 40 MHz
Pulse width < 90 ps (FWHM) at average power
0.3 mW at 40 MHz
Pulse width < 300 ps (FWHM) at average power
1.0 mW at 40 MHz
Peak power up to 100 mW
External electrical trigger input
Low jitter electrical sync output