



PRESS RELEASE

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Title: Double-Pulse 532-nm Nd:YAG Laser for PIV

What is PIV

PIV (Particle Image Velocimetry) is a technique in fluid dynamics to determine the flow characteristics of a fluid in motion. A laser beam in the form of a thin sheet of light is directed into a fluid into which small reflective particles have been suspended. The laser produces pairs of pulses that are closely spaced in time. A high-speed camera positioned perpendicular to the sheet of light captures reflected images from the particles that are produced by the pairs of laser pulses. From a precise knowledge of the time separation of the two pulses, the flow characteristics of the fluid may be determined.

Double-Pulse Model LDP-100MQG/PIV

The LDP-100MQG/PIV is a 50-Watt average power, diode-pumped Nd:YAG laser with emission wavelength at 532 nm. It contains an acousto-optic Q-switch for pulse generation up to 50 kHz.

A special, double-pulse configuration of the LDP-100MQ/PIV permits emission of pairs of 532-nm laser pulses over a wide range of pulse-pair frequencies (up to 14 kHz) and double-pulse separation times (20 μ s to 200 μ s), always with equal energy content of both pulses in the pulse pair. This unique ability of the LDP-100MQG/PIV increases the accuracy and value of the fluid-flow data that can be obtained from this laser.

Lee Laser manufactures industrial-grade Nd:YAG lasers for a wide range of micromachining applications, with output power levels up to 500 Watts at 1064 nm and 100 Watts at 532 nm.

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