

# LS-2134D Double Pulsed Nd:YAG Laser



*LOTIS TII double pulsed Q-switched Nd:YAG lasers are designed to provide highly stable, pulsed IR and green light radiation for Particle Image Velocimetry (PIV), Laser Induced Breakdown Spectroscopy (LIBS) and other kinetic applications.*

The compactness of double pulsed lasers (DPL) is provided by a special design of the laser head: two independent laser resonators pumped by a single flash lamp are integrated in one laser emitter. A single power supply and a single cooling unit (with water-to-air heat exchanger) are used in DPL.

Ease of use is provided through availability of multiple triggering:

- ❖ single-shot push button trigger and continuous internal trigger from remote control,
- ❖ external TTL trigger,
- ❖ computer-controlled laser operation via RS232 port.

DPL combine the reliability and rigidity of LS-2134 laser with operation in dual pulse mode: two output pulses of equivalent energy; polarization and high beam uniformity.

Dual output ports allow each oscillator to operate independently when necessary.

DPL can be fit with all LOTIS harmonic generators and tunable solid state lasers.

## Specification

Parameter	Value	
Energy, mJ	1064 / 532 nm	200 / 110
Pulse duration (FWHM, at 1064 nm), ns	10–12	
Pulse repetition rate, Hz	1–10	
Beam divergence, mrad	2.5	
Beam diameter, mm	6,3	
Delay between laser pulses*, $\mu$ s	1–80	
Jitter**, ns	$\pm$ 1.0	
Energy stability*** (1064 nm), %	$\pm$ 3.0	
Size L x W x H, mm (Weight, kg)	Laser head	755 x 270 x 113 (21.0)
	Power supply	363 x 364 x 192 (16.5)
	Cooling system	363 x 364 x 280 (15.5)
	Remote control	105 x 175 (0.5)
Power requirements	Single phase, 220 $\pm$ 20 V, 50–60 Hz, 600 W	

\* 1  $\mu$ s steps, other steps (1–100 ns) are available on request

\*\* with respect to external trigger of Q-switch

\*\*\* shot to shot for 99% of pulses

