

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*, μ 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 192 (15.5)
	Remote control	105 x 175 (0.5)
Power requirements	Single phase, 220 \pm 20 V, 50–60 Hz, 600 W	

* 1 μ 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

