

LS-2137 Pulsed Nd:YAG Laser



LOTIS TII LS-2137 combines the compactness of LS-2134 laser with the increased energy and small divergence due to the intracavity telescope and special double rod laser pumping chamber, which allows operation in the mode of oscillator-amplifier with a single power supply and a cooling system.

Using the unique laser chamber design reduces undesired parasitic oscillations that can limit output energy.

The closed and rigid folded structure of laser emitter provides small dimensions, stable and dust free operation of laser components.

The crystals of the second (KTP), third (KDP) and fourth (KDP or BBO) set in the precise temperature controlled ovens and harmonic separators provide highly efficient generation and high spectral purity of the output radiation.

There is no need for external water supply since the cooling system is totally self-contained with water-to-air heat exchanger.

The fifth harmonic assembly (213 nm) can be accessed by using a BBO crystal to mix the fourth harmonic with the fundamental frequency as well as to mix the second and the third harmonics. It gives a convenient and cost effective source of a short UV radiation.

Specification

Parameter	Value	
Energy, mJ	1064 nm	600
	532 nm	330
	355 nm	120 / 100*
	266 nm	90
	213 nm	22**
Pulse duration (FWHM at 1064 nm), ns	16–18	
Pulse repetition rate, Hz	1–10	
Beam divergence, mrad	≤0.7	
Beam diameter, mm	≤8.0	
Jitter***, ns	±1.5	
Energy stability**** (1064 nm), %	±3.0	
Size L x W x H, mm (Weight, kg)	Laser head	1037 x 236 x 136 (39.0)
	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±20 V, 50–60 Hz, 750 W	

* for OPO pumping (with protective mirror, cutting back reflection)

** with Harmonic Generator Assembly HG-Fifth

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

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

