

LS-2147 Pulsed Nd:YAG Laser



LOTIS TII LS-2147 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 850
	532 nm 470
	355 nm 170 / 145*
	266 nm 120
	213 nm 25**
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

