

INTEGRATED Nd:YAG-Ti SAPPHIRE LASER SYSTEMS

LS-2134-LT40 AND LS-2145-LT50



LS-2134-LT40 and LS-2145-LT50 are fully integrated laser systems that combine Q-switched pump laser and Ti sapphire converter of Nd:YAG second harmonic radiation (532 nm) into tunable near IR, UV and visible spectral band. They are designed for scientific research in photochemistry, biology, medicine, for PAT and LIBS applications. The lasers consist of laser head, power supply (PS), cooling system (CS) with water-to-air heat exchanger, controller (CU) and remote control (RC).

Features:

- Possibility of independent operation of pump laser at 1064 and 532 nm as well as tunable lasing
- Hands free operation and automatically switching output wavelengths
- Built-in monitors of Nd:YAG FF and SH output energy
- Built-in high efficiency $\text{Al}_2\text{O}_3:\text{Ti}^{3+}$ second harmonic unit
- Narrow output linewidth (option)
- Laser can be fit with external third and forth harmonic units of Nd:YAG and Ti:Sa (option), which increases the total tuning range to the UV spectral range up to 210 nm
- PC control of pump laser and fundamental harmonic of Ti:Sa laser (option)

SPECIFICATIONS¹

Model		LS-2134-LT40	LS-2145-LT50
Wavelength		1064, 532, 355 ² , 266 ²	
Tuning range($\Delta\lambda$), nm	FF	690-1000	
	SH	350-500	
	TH	235-325 ²	
	FH	210-235 ²	
Pulse Energy Nd:YAG, mJ	FF	260	350
	SH	160	230
Ti:Sa, mJ	FF(at max. of tuning curve)	$\geq 40/18^3$	$\geq 50/25^3$
	SH(at max. of tuning curve)	$\geq 20/7^3$	$\geq 20/10^3$
Linewidth of generation ($\delta\lambda$), nm		$\leq 0.1/0.01^3$	
Pulse Repetition Rate (f), Hz		0,1; 0,2; 0,5; 1; 2; 5; 10	
Pulse Duration (FWHM), τ , ns	1064nm	12-15	
	Ti:Sa(at FF)	8-30	
Beam Divergency, Θ , mrad	1064nm	≤ 1.0	
	Ti:Sa(at FF)	≤ 1.5	
Input Power Requirement		(220 \pm 20)V, (50/60) Hz, single phase, 1000 VA	
Size L x W x H, mm (Weight, kg)		Laser head 670x 474 x 143 (25.0) Power supply 391 x 364 x 192 (16.5) Cooling system 391 x 364 x 280 (15.5) Control Unit for PC control 256 x 257 x 111 (7.0) HG-TF Unit for Ti:Sa 328 x 236 x 130 (6.0)	

¹ All specifications are subject to change without notice

² With external HG-TF units

³ With intracavity etalon

