

INTEGRATED LASER SYSTEMS

LS-2134-LT40 AND LS-2145-LT50

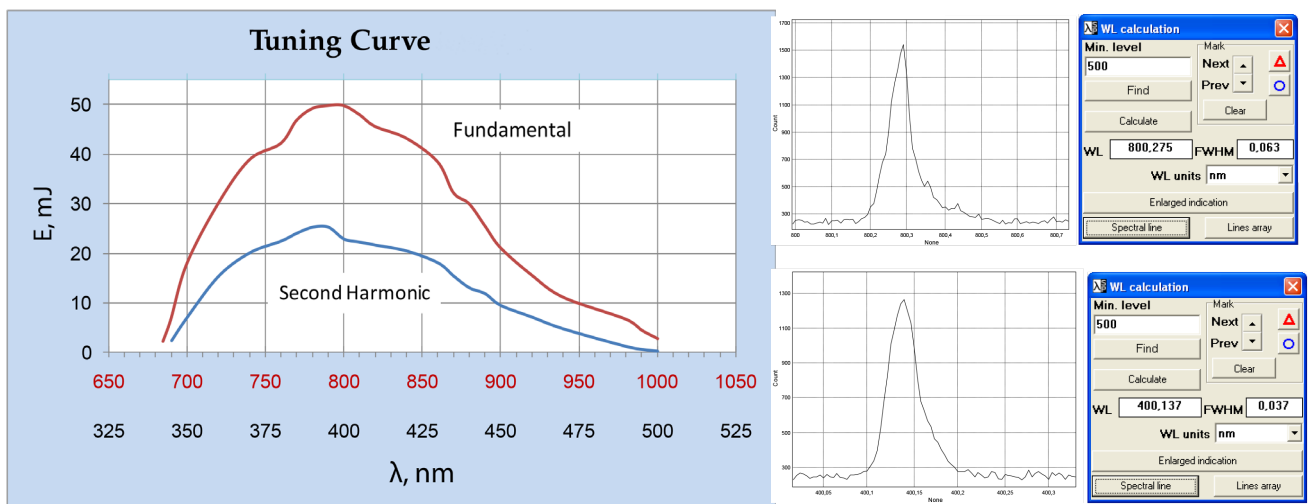


LS-2134-LT40 and LS-2145-LT50 are fully integrated laser systems that combine Q-switched pump laser and Ti sapphire converter of Nd:YAG second harmonic radiation (532 nm) into tunable near IR, UV and visible spectral band. They are designed for scientific research in photochemistry, biology, medicine, for PAT and LIBS applications.

The integrated, single design of the laser emitter makes the laser easy to install and maintain and makes it a simple, convenient source of tunable coherent radiation for solving a wide range of problems in biology, photochemistry, lidar research, laser emission spectroscopy, etc.

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 fourth 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)



Typical tuning curves of the fundamental frequency and second harmonic of the Ti:Sa laser LS-2145-LT50 ($E_{532\text{nm}}=170\text{ mJ}$)

Typical linewidths of generation of fundamental frequency (800 nm) and second harmonic (400 nm) Ti:Sa

SPECIFICATIONS¹

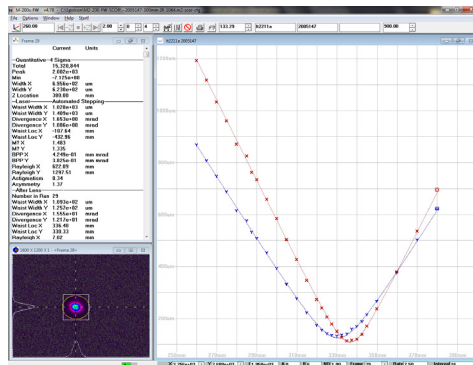
Model		LS-2134-LT40	LS-2145-LT50
Wavelength		1064, 532, 355 ² , 266 ²	
Tuning range($\Delta\lambda$), nm	FF	690-1000	
	SH	350-500	
	TH	235-325 ²	
	FH	210-235 ²	
Pulse Energy Nd:YAG, mJ	FF	260	350
	SH	160	230
Ti:Sa, mJ	FF(at max. of tuning curve)	$\geq 40/18^3$	$\geq 50/25^3$
	SH(at max. of tuning curve)	$\geq 20/7^3$	$\geq 20/10^3$
Linewidth of generation ($\delta\lambda$), nm		$\leq 0.1/0.01^3$	
Pulse Repetition Rate, Hz		10	
Pulse Duration (FWHM)	ns 1064nm	12-15	
	Ti:Sa(at FF)	8-40 ⁴	
Beam Divergency ($\Theta_{0.86}$), mrad	1064nm	≤ 1.0	
	Ti:Sa(at FF)	≤ 1.5	
Input Power Requirement		100-220V, 50/60 Hz, single phase, 1000 W	
Size L x W x H, mm (Weight, kg)		Laser head	670x 474 x 143 (25.0)
		Power supply LPS-2230M	461x276x504 (26.0)
		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 ethalon

⁴ Pulse duration depends on wavelength



Ti sapphire M² profile

