LS-2145-LT150

Power Nd:YAG laser with build-in $Al_2O_3:Ti^{3+}$

LS-2145-LT150 *is a "one body" model of pulsed Q-switched Nd:YAG laser with built-in $Al_2O_3:Ti$ (Ti:Sa) tunable laser lasing at the FF (1064nm), the SH (532nm) and tunable in a spectral range 730-900 nm. It is designed for scientific research in photochemistry, biology, medicine, especially for PAT and LIBS applications. The laser consists of laser head, power supply (PS), cooling system (CS) with water-to-air heat exchanger, controller (CU), and remote control (RC)*

Features &advantages:

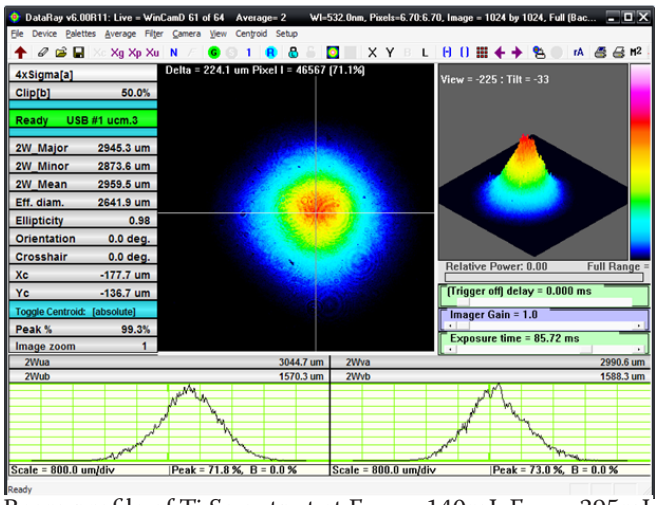
-Full PC control of output wavelength, fast tuning and switching mechanism

-Rigid design of pump source and tunable laser in one laser head, providing high stability of output parameters.

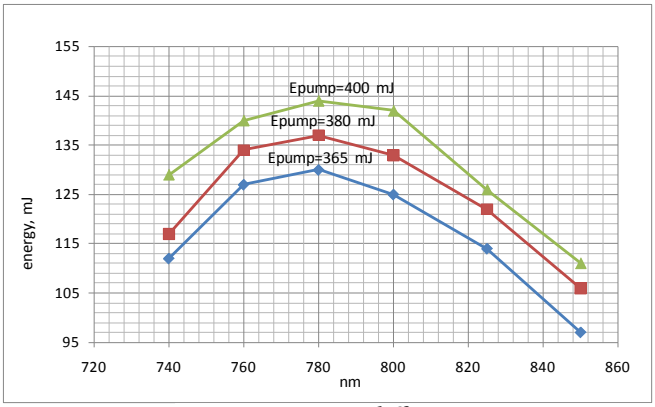
-Special design of TiSa cavity and pump light delivery system

-The possibility of independent operation at fundamental frequency (FF, 1064 nm,) second harmonic (SH, 532 nm) and tunable in the spectral range 730-900 nm.

-Built-in photo probes of Nd:YAG FF and TiSa output radiation



Beam profile of Ti:Sa output at E_{797nm}=140mJ, E_{pump}=395mJ



Tuning curves at different pump energies

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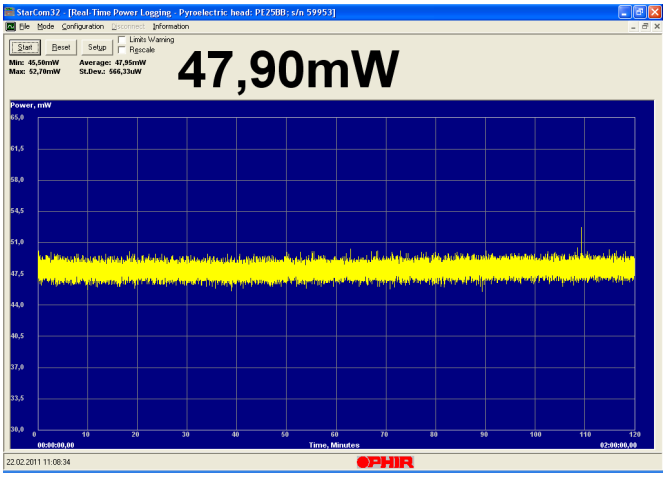
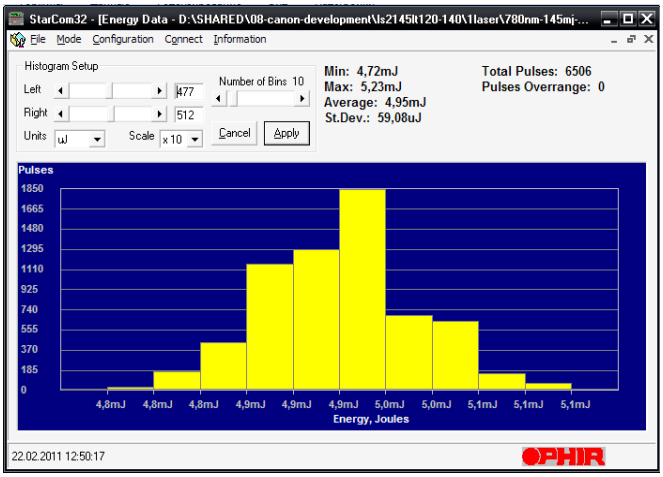
Specification

Parameter	Value	Note
Wavelength, nm	1064, 532,	FF and SH of Nd:YAG
Tuning range(Δλ), nm	730-900	Tunable
Pulse Energy FF (E), mJ	700	
SH, mJ	400	
Ti:Sa, mJ	140*	At max. of tuning curve
Linewidth of generation (δλ), nm	≤3.0	
Pulse Repetition Rate (f), Hz	10*	
Pulse Duration (FWHM),$\tau_{0.5}$ ns	12-18	Depend on output energy
Beam Divergency, $\Theta_{0.86}$ mrad	≤1.5	
Input Power Requirement	(220±20)V, (50/60) Hz, single phase, 10A	
Size L x W x H, mm (Weight, kg)		
Laser head	800/850**x450/500**x150 (68.0)	**-With external beam stop
Power supply	446 x 449 x 177 (19.0)	
Cooling System	446 x 449 x 266 (20.0)	
Control Unit	446 x 449 x 133 (7.0)	

*On custom requirements laser can be produced with improved parameters: prr up to 20 Hz, tuning range 700-950 nm, δλ≤1 nm
Specifications are subjected to change without notice



Long term power stability of Ti:Sa output (E_{797nm}=140 mJ; 8 hours of operation)



Shot to shot output energy stability; E_{797nm}=140 mJ; st.dev=1.2% for over 6000 pulses