

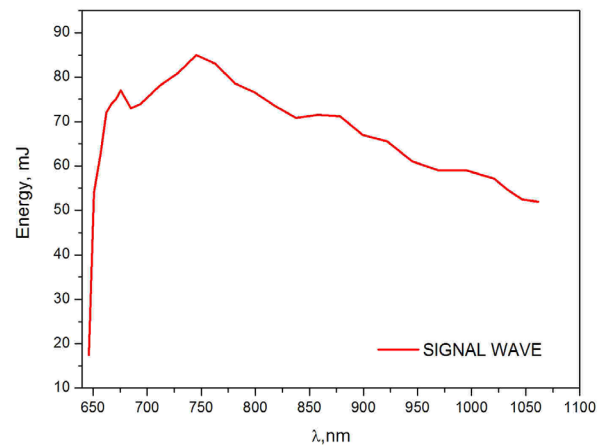
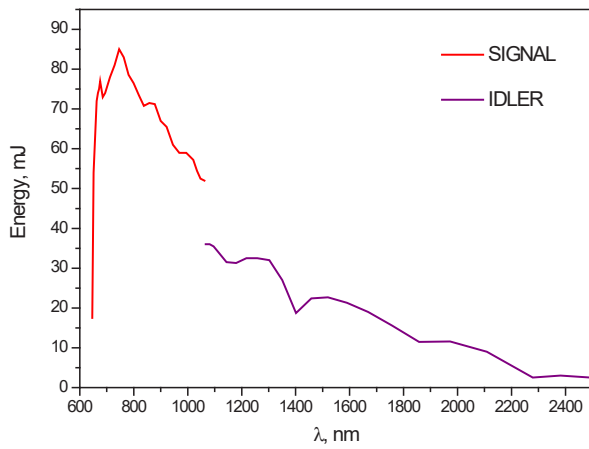
LS-2145-OPO532 INTEGRATED OPO LASER SYSTEM FOR PAT APPLICATIONS

LS-2145-OPO532 is a Q-switched Nd:YAG laser with a built-in optical parametric oscillator (OPO) providing conversion of Nd:YAG second harmonic (532 nm) radiation into the tunable light of near IR and red edge of visible. An integrated single laser emitter design makes it easy to install and maintain the laser. It is designed for scientific research in biology, photochemistry, spectroscopy, etc. One of the most popular applications for such systems is photoacoustic tomography (PAT).

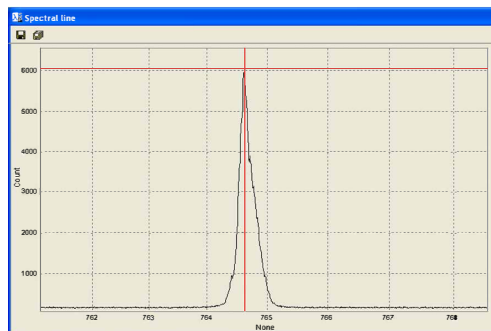
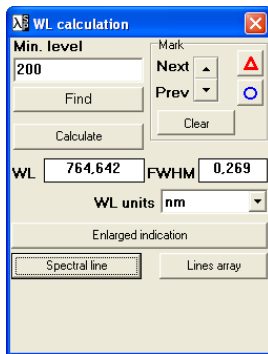


Main features:

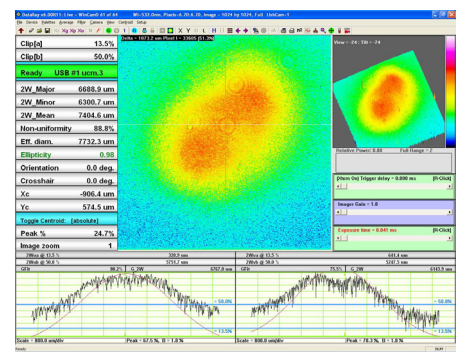
- Independent outputs of Nd:YAG laser harmonics (1064 nm and 532 nm) as well as OPO radiation
- Automatically switching of wavelength outputs and OPO tuning (optionally).
- PC control of laser parameters.
- Monitoring of Nd:YAG harmonics energy by built-in photo probes
- Small divergence and narrow line width of OPO radiation
- Polarizing separation of OPO signal and idler waves
- Single BBO crystal for the whole tuning range



Typical tuning curves of OPO SW and OPO IW



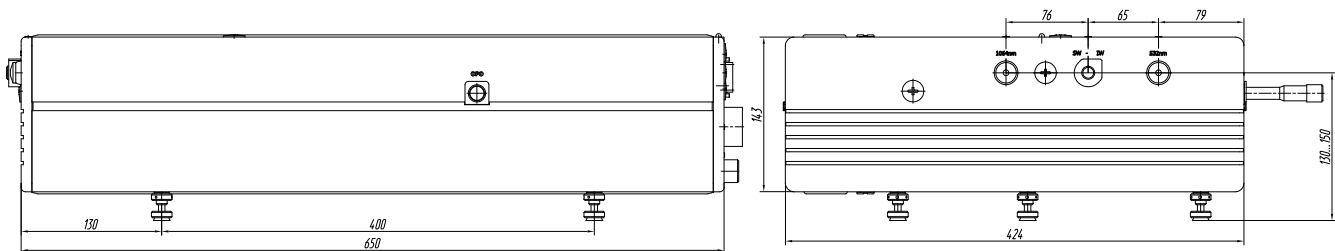
Typical spectral line width



Typical OPO Beam profile (SW, near field)

Specification

Parameter	LS-2145-OPO532
Operation wavelength Nd:YAG, nm	1064, 532
OPO tuning range ,nm	
Signal wave (SW)	660-1064
Idler wave (IW)	1064-2300
Second harmonic SHG-OPO (option)	330-660
Output Energy, mJ	
1064 nm	350
532 nm	210
SW (at max. of tuning)	70
IW (at max. of tuning)	30
OPO linewidth (SW, 765 nm), nm	≤0,5
Output pulse energy stability (StDev),%	
1064 nm	≤0.6
532 nm	≤0.8
SW (at max. of tuning)	≤3
Pulse duration (FWHM), ns	
1064 nm	12-15
OPO	6-10
Pulse repetition rate , Hz	10
Output beam diameter, mm	
Nd:YAG laser	≤6
OPO	≤5
Beam divergence, ($\Theta_{0,86}$) mrad	
1064 nm	≤1.0
OPO (SW)	≤2.5
Polarization	
1064 nm, SW	horizontal
532nm, IW	vertical
Power requirements	100-220 V, 50/60 Hz, 1000 W
Size,mm (weight, kg)	
Laser head	650x424x143 (28)
Power supply LPS-2230M	461x276x504 (26.0)
Remote keypad	130x180 (0.5)



Overall sizes of LS-2145-OPO532