

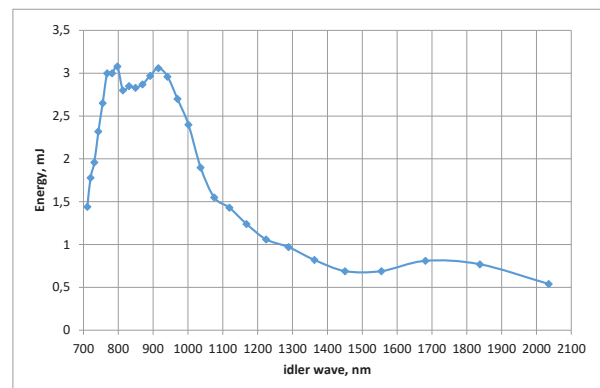
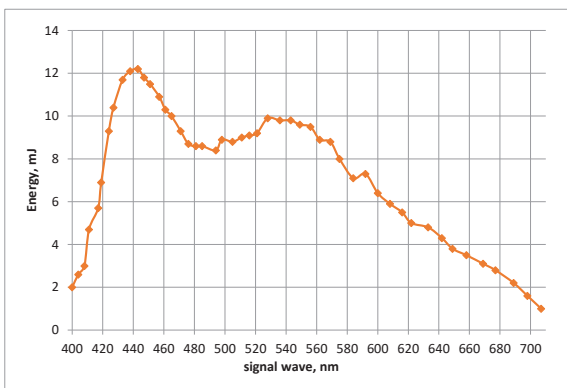
LS-2146-OPO

LS-2146-OPO – High energy DPSS integrated laser system Nd:YAG laser – tunable optical parametric oscillator

LS-2146-OPO is a Q-switched DPSS Nd:YAG laser with built-in midband optical parametric oscillator (OPO) providing conversion of Nd:YAG third harmonic (355 nm) radiation into the tunable light of near IR, visible and UV spectral range. It is designed for scientific research in biology, photochemistry, spectroscopy, etc.

The main features:

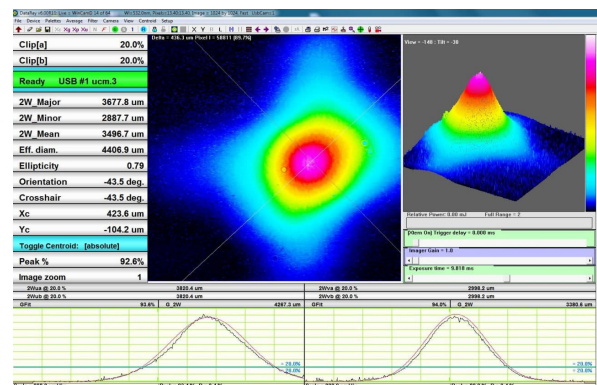
- An integrated single laser emitter design makes it easy to install and maintain the laser
- 100Hz repetition rate
- Up to 10mJ energy per pulse from OPO and more than 1.5mJ in UV
- Independent outputs of all Nd:YAG laser harmonics (1064 nm, 532 nm 355 nm) as well as OPO radiation
- Automatically switching of wavelength outputs, including monitoring of Nd:YAG harmonics energy by built-in photo probes
- PC control of laser parameters
- Small divergence and narrow line width of OPO radiation
- Single BBO crystal for the whole tuning range
- Second harmonic generator SHG-OPO for tuning range extension in UV range (option)



Typical tuning curves of signal and idler waves, E (355 nm) = 50 mJ



Typical tuning curve of second harmonic OPO

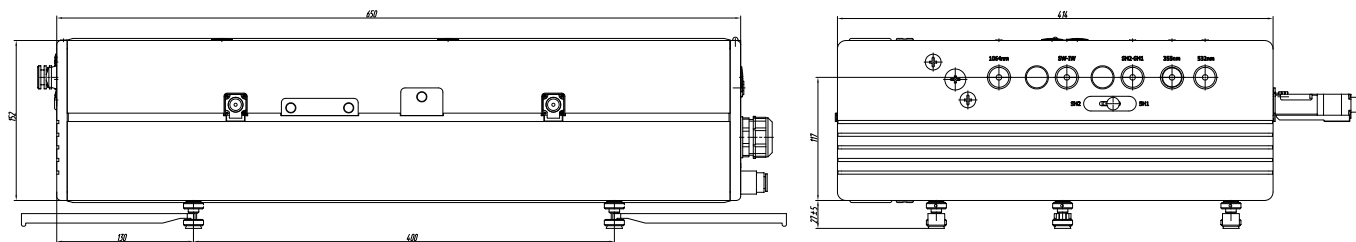


Typical beam profile SW OPO (far field)

SPECIFICATIONS

Parameter	LS-2146-OPO
Operation wavelength Nd:YAG, nm	1064, 532, 355
OPO tuning range ,nm	
Signal wave (SW)	405-700
Idler wave (IW)	710-2300
SH OPO (option)	210-400
Output Energy, mJ	
1064	160
532	80
355	50
SW (At max. of tuning)	10
IW (At max. of tuning)	2.5
SH OPO (at max)	1.5
OPO linewidth (SW), nm	<0.1
Output pulse energy instability (StdDev),%	
1064	<0.6
532	<0.8
355	<1.5
SW (At max of tuning)	<3.0
IW (At max of tuning)	<5.0
Pulse duration ($\tau_{0.5}$), ns	
1064 nm	$\leq 8-10$
OPO	$\leq 4-6$
Pulse repetition rate , Hz	100
Output beam diameter, mm	
Nd:YAG лазер	≤ 6
OPO	≤ 5
Beam divergence, ($\Theta_{0.86}$) mrad	
Nd:YAG	≤ 1.5
OPO	≤ 3.0
Polarization	
1064 nm, 532nm, SW	horizontal
355 nm, IW, SH OPO	vertical
Power requirements	220 \pm 20 V, 50–60 Hz, 10 A
Size,mm (weight, kg)	
Laser head	650x414x152 (28)
Power supply	440x364x207 (9.6)
Cooling unit	500x377x650 (40)
Remote keypad	130x180 (0.5)

All specifications are subject to change without notice.



Overall sizes of LS-2146-OPO