

NL310

SERIES

High Energy Nanosecond Q-switched Nd:YAG Lasers



High-energy nanosecond pulses, excellent beam quality and 1% pulse energy stability make these nanosecond Q-switched Nd:YAG lasers an excellent choice for pumping of dye, Ti:Sapphire lasers and OPOs. In addition, the extremely low jitter of the optical pulse with respect to the sync pulse allows for the reliable synchronisation of the laser with external equipment.

For the convenience of customers, the NL310 series nanosecond Q-switched laser is controlled either through its RS232 type PC interface with LabView™ drivers (included), or through a user-friendly remote control pad. Both options allow for the easy control of laser settings.

The compact size enables the system to fit into tight spaces, freeing the experiment area for other instruments. The power supply and cooling unit fit easily under optical tables. The optional second (SH) (for 532 nm), third (TH) (for 355 nm) and fourth (FH) (for 266 nm) harmonic generator modules are designed for easy insertion and removal.

The simple and proven design ensures the easy maintenance and long-term stability of laser operation.

FEATURES

- Up to **1.6 J** output energy
- **Excellent** pulse energy stability
- **10 or 20 Hz** repetition rate
- Thermo stabilized **harmonics generator** as standard option
- **Remote** control via keypad
- **PC control** via RS232 port and LabView™ drivers
- **Low jitter** internal/external synchronization
- **Robust and stable** laser head

APPLICATIONS

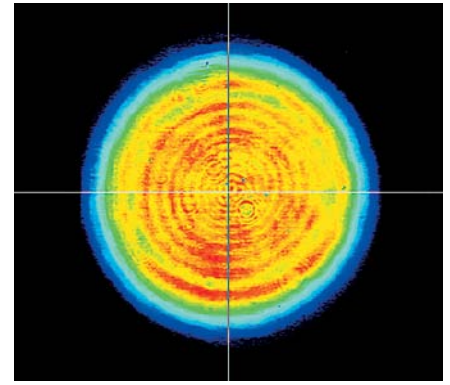
- OPO, Ti:Sapphire, dye laser pumping
- Material processing
- Plasma studies
- Laser spectroscopy
- Remote sensing
- Your application is welcome...

SPECIFICATIONS ¹⁾

MODEL	NL311	NL313
Max. pulse energy:		
at 1064 nm	1300/1000 mJ ²⁾	1600 mJ
at 532 nm	600/440 mJ ²⁾	800 mJ
at 355 nm	350/290 mJ ²⁾	450 mJ
at 266 nm	130/90 mJ ²⁾	150 mJ
Pulse energy stability ³⁾	1.0 %	
Power drift ⁴⁾	3 %	
Pulse duration ⁵⁾	4–6 ns	
Max. repetition rate	10/20 Hz	10 Hz
Polarization at 1064 nm	linear, >85/80 % ²⁾	linear, >85 %
Optical pulse jitter ⁶⁾	0.5 ns	
Linewidth at 1064 nm	< 1 cm ⁻¹	
Beam profile		
Near field	"Hat-Top"	
Far field	near Gaussian	
Beam diameter	10 mm	12 mm
Beam divergence ⁷⁾	< 0.5 mrad	
Beam pointing stability at 1064 nm	± 50 μrad	
Beam height	165–195 mm	
PHYSICAL CHARACTERISTICS		
Laser head size (W×H×L)	310×230×800 mm	
Powering/cooling cabinet size (W×H×L)	550×550×600 mm	
Umbilical length	2.5 m	
OPERATING REQUIREMENTS		
Water consumption (max 20 °C)	< 10 l/min	
Room temperature	15–30 °C	
Relative humidity (noncondensing)	20–80 %	
Mains voltage ⁸⁾	208 or 240 VAC, single phase 50/60 Hz	
Power consumption	< 3.5 kVA	

¹⁾ All specifications subject to change without notice. Parameters marked typical are not specifications. They are indications of typical performance and will vary with each unit we manufacture. Unless stated otherwise, all specifications are measured at 1064 nm.
²⁾ 20 Hz versions.
³⁾ Averaged from 300 shots, Std. Dev, after 5 minutes of warm-up.

⁴⁾ Within 8 hours after 20 minutes of warm-up.
⁵⁾ FWHM.
⁶⁾ In respect to Q-switch triggering pulse, Std. Dev.
⁷⁾ Full angle at 1/e².
⁸⁾ 20 Hz version of NL311 requires 3 phase mains.



Near field
Typical beam profile
of the NL310 series lasers

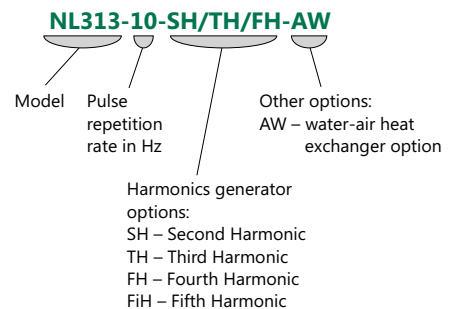
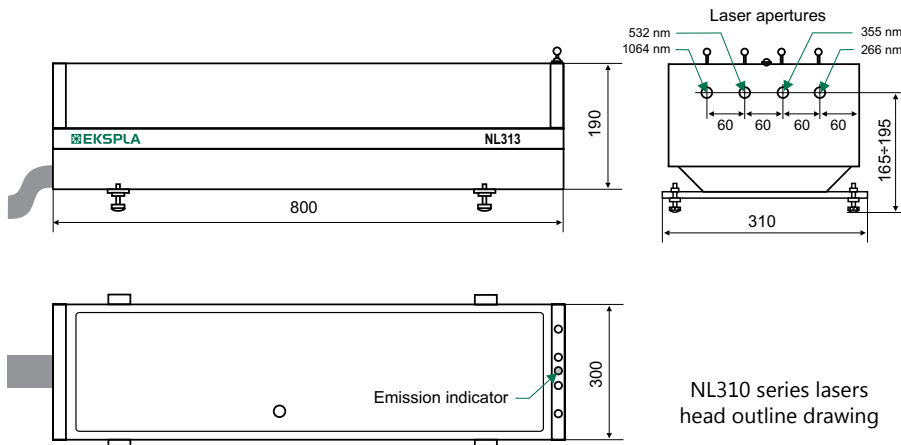
RELATED PRODUCTS

NL300 SERIES Q-SWITCHED NANOSECOND Nd:YAG LASERS

- Up to 800 mJ pulse energy
- 10 or 20 Hz repetition rate
- Compact size

HIGH ENERGY CUSTOM SYSTEMS

- Pulse energy up to 160 J



Requests for custom made products are welcome !



EKSPILA
 Savanoriu av. 231
 02300 Vilnius
 LITHUANIA

Ph.: +370 5 2649629
 Fax: +370 5 2641809
 sales@ekspla.com
 www.ekspla.com

Find local distributor at
www.ekspla.com



ISO 9001

CERTIFIED