

# NL200

## SERIES

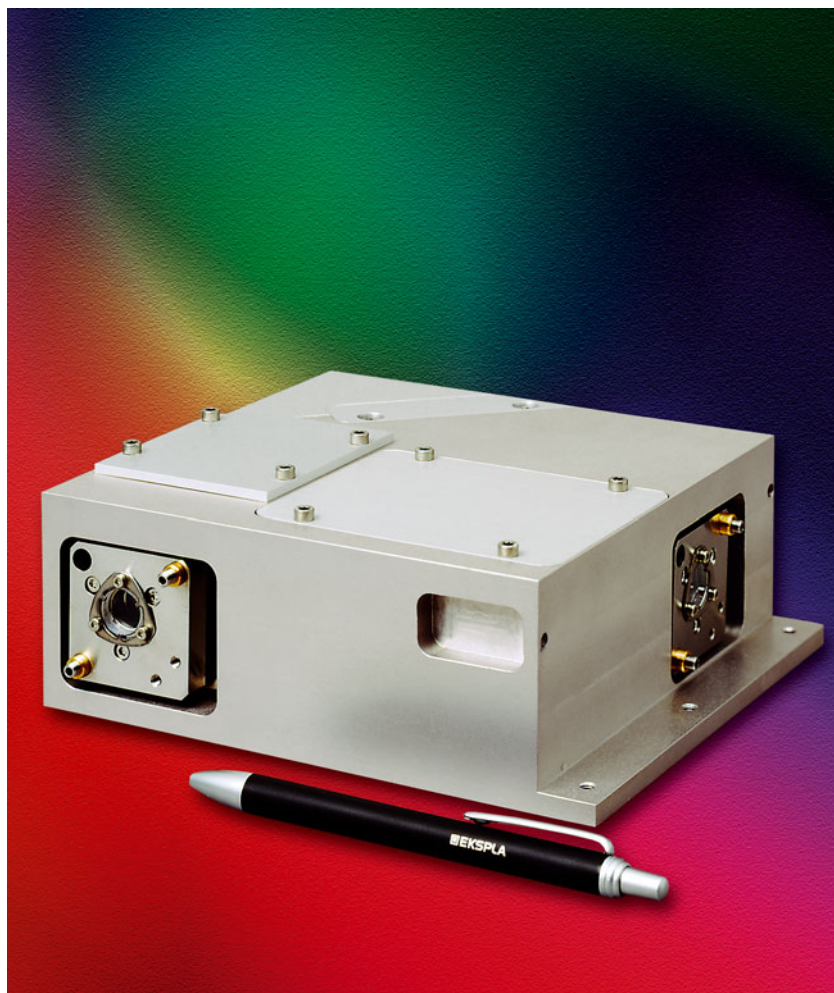
### Nanosecond Diode Pumped Nd:YAG Laser

#### FEATURES

- Up to **2 mJ** pulse energy at **1064 nm**
- **532 nm, 355 nm, 266 nm** wavelengths as standard option
- ~ **9 ns** pulse duration at **1064 nm**
- Up to **2500 Hz** variable repetition rate
- **Internal/external TTL** triggering
- **Electro-optical Q-switching**
- **Turn-key** operation
- **Sealed** cavity
- Extremely **compact** size
- Simple and robust
- **Air cooled**
- Processor control via **RS232**
- **Remote** control pad

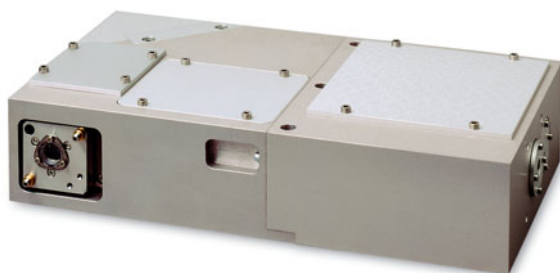
#### APPLICATIONS

- Spectroscopy
- Remote sensing
- Material processing
- Marking
- Micromachining
- Engraving
- Laser deposition
- Laser cleaning
- Ablation
- Your application is welcome...



NL200 series nanosecond diode pumped Q-switched Nd:YAG lasers offer 2 mJ per pulse at 1000 Hz. End-pumped design ensures compact size of this nanosecond laser. Harmonic generation modules for

specific material processing applications like pulsed laser deposition, ablation through mask or intravolume marking of transparent materials, when higher pulse energy is required. Excellent energy stability and wide



NL200 series laser with harmonics module attached

532 nm, 355 nm and 266 nm wavelengths can be combined into one module, easy attachable to the laser cavity.

Featuring short pulse duration, variable repetition rate and external TTL triggering, nanosecond diode pumped NL200 series lasers are excellent cost effective choice for

range of wavelength options makes this laser a perfect tool for spectroscopy and remote sensing applications.

Mechanically stable and hermetically sealed design ensures reliable operation and long lifetime of laser components.

## SPECIFICATIONS

MODEL	NL202	NL201
Pulse energy, mJ		
at 1064 nm	> 2.0	> 0.7
at 532 nm	> 0.9	> 0.3
at 355 nm	> 0.6	> 0.12
at 266 nm	> 0.2	> 0.05
Pulse duration, ns <sup>1)</sup>	< 9	< 7
Pulse to pulse energy stability, % <sup>2)</sup>		< 1
Repetition rate, Hz	0–1000	0–2500
Active media	Nd:YAG	Nd:YVO <sub>4</sub>
Beam profile		TEM <sub>00</sub>
M <sup>2</sup>		< 1.3
Beam divergence, mrad <sup>3)</sup>		< 2.5
Polarization <sup>4)</sup>		linear, horizontal, >100:1
Beam diameter, mm <sup>5)</sup>	~ 0.8	~ 0.6
Optical jitter, ns <sup>6)</sup>		±1
<b>PHYSICAL CHARACTERISTICS</b>		
Laser head size (W×H×L), mm <sup>7)</sup>		150×63×196
Power supply/pump diode unit (W×H×L), mm		365×289×365
<b>OPERATING REQUIREMENTS</b>		
Ambient temperature, °C		15–30
Relative humidity (non-condensing), %		10–80
Voltage		100–240 VAC, single phase 50/60 Hz
Power, W		< 200

<sup>1)</sup> FWHM at 1064 nm.

<sup>4)</sup> At 532 nm and 355 nm.

<sup>7)</sup> With optional harmonics unit laser

Specifications are subject to changes without advance notice.

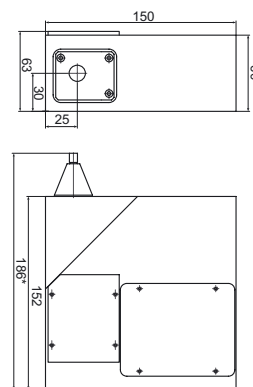
<sup>2)</sup> At 1064 nm, Std. dev.

<sup>5)</sup> At level 1/e<sup>2</sup>.

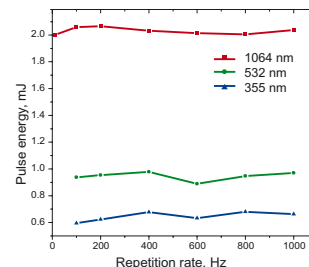
head size is (W×H×L), mm : 150×63×280.

<sup>3)</sup> Full angle @ 1/e<sup>2</sup>.

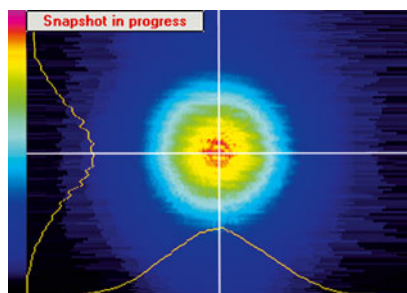
<sup>6)</sup> With respect to output sync pulse.



Typical laser head outline drawing

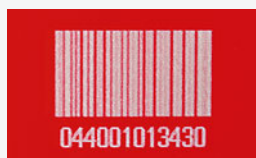


Typical performance data of model NL202 laser

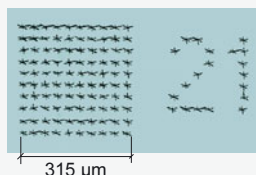


Typical beam profile of model NL202 laser

### SUBSURFACE MARKING



Subsurface marking of serial numbers, trademarks, barcodes, DataMatrix codes



Subsurface marking small, "invisible" signs or specific codes to distinguish valuable original item



Polycarbonate

### RELATED PRODUCTS

#### NANOSECOND Q-SWITCHED DIODE PUMPED NL640 SERIES LASERS

- Up to **6 W** output power at **40 kHz**
- Up to **0.5 mJ** pulse energy at **5 kHz**
- **6–14 ns** pulse duration



#### HIGH ENERGY DIODE PUMPED Q-SWITCHED Nd:YAG NL220 SERIES LASERS

- **10 mJ** at **1064 nm**
- **1 kHz** repetition rate
- High pulse energy stability



### MACHINING SAMPLES



Surface marking of sapphire



Deep engraving of metal alloy. Stamp

Requests for custom made products are welcome!



Lasers and Laser Systems Div.  
Savanoriu av. 231  
02300 Vilnius – 53  
L I T H U A N I A

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

EKSPLA distributor in United Kingdom:



Ingcrys Laser Systems Ltd  
14 Parris Road, Stokenchurch,  
High Wycombe, Bucks. UK  
Tel.: + 44 (0) 1494 482541  
Fax: + 44 (0) 1494 482873  
Email: sales@ingcrys.com  
www.ingcrys.com