

NL220

SERIES

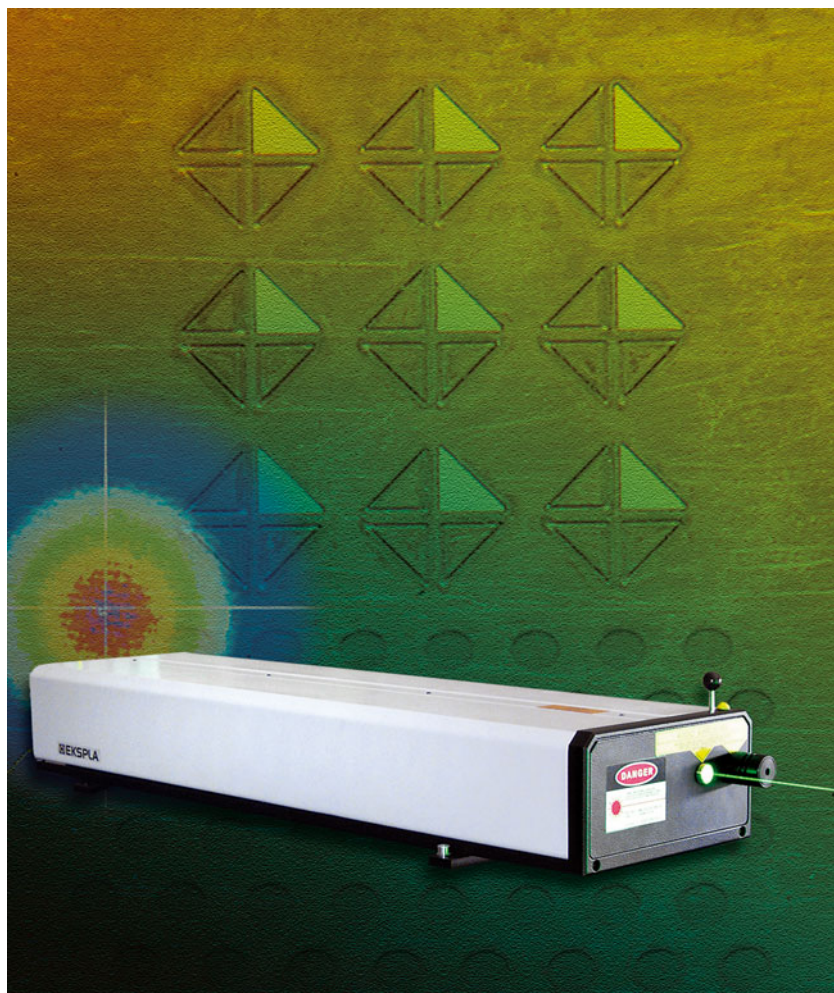
HIGH ENERGY Diode Pumped Nanosecond Q-switched Nd:YAG Lasers

FEATURES

- 10 mJ at 1064 nm
- 1 kHz repetition rate
- 532/355/266 nm wavelengths available
- High pulse energy stability
- TEM₀₀ shape beam
- Simple and robust all solid state design
- Sealed cavity
- External triggering
- Water to air cooling (closed loop chiller)
- Variable repetition rate
- Processor control via USB/CAN and RS232
- Remote control via keypad

APPLICATIONS

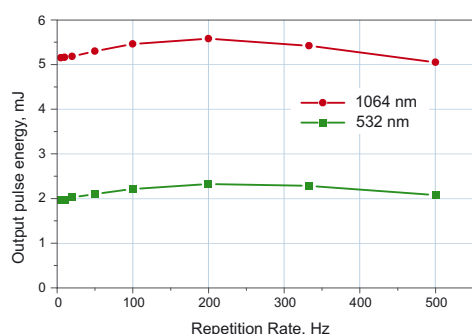
- Spectroscopy
- Micromachining
- Marking
- Ablation
- Deep engraving
- Cutting
- Drilling
- Ti:Sapphire and dye laser pumping
- Your application is welcome...



Diode pumped NL220 series lasers provide up to 10 mJ per pulse at 1 kHz repetition rate. Featuring compact size and turnkey operation NL220 series lasers are ideal for integration into other systems. Closed loop chiller, used in this laser, eliminates the need for external cooling water.

development as well as industrial tasks. Version for PIV (particle image velocimetry) is available.

For customer convenience, the laser is controlled through its RS232 or USB/CAN type PC interface with LabView drivers (included) or a user-friendly remote control pad. Both



Typical performance data of model NL221 laser

TEM₀₀ shape beam, high energy, and kHz variable repetition rate establish the NL220 series lasers as excellent choice for many applications, including micromachining, material processing, marking, laser spectroscopes and other research and

options allow easy control of laser settings.

In addition, the very low jitter of the optical pulse with respect to the sync pulse allows reliable synchronization of the laser with external equipment.

SPECIFICATIONS

MODEL	NL221	NL220
Pulse energy, mJ:		
at 1064 nm	5	10
at 532 nm	2	4.5
at 355 nm	—	3
at 266 nm	—	1.5
Output power, W:		
at 1064 nm	2.5 ¹⁾	10
at 532 nm	1 ¹⁾	4.5
at 355 nm	—	3
at 266 nm	—	1.5
Pulse duration, ns ²⁾	15–18	24–27
Pulse to pulse energy stability (StDev), %		
at 1064 nm	0.7	1.5
at 532 nm	2.0	2.5
Long term energy drift (StDev), % ³⁾	2	
Repetition rate, Hz	single shot – 500, variable	1000
M ²	<1.35	
Beam diameter, mm	1.2	1.5–2
Pointing stability, μ rad	± 50	
Beam divergence, mrad ⁴⁾	< 1.5	
Polarization	linear, horizontal	
Optical jitter (StDev), ns	0.5	
Beam profile	TEM ₀₀	

PHYSICAL CHARACTERISTICS

Laser head dimensions (L×W×H), mm	850×142×123	730×210×120
Power supply and control unit dimensions (L×W×H), mm	500×452×145	500×452×145
Umbilical length, m	2.5	

OPERATING REQUIREMENTS

Cooling	closed loop chiller	
Ambient temperature, °C	18–27	
Relative humidity (noncondensing), %	10–80	
Voltage	100–240 VAC, single phase 50/60 Hz	
Power, kW	< 1	

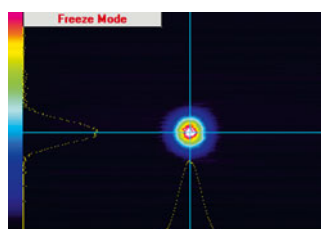
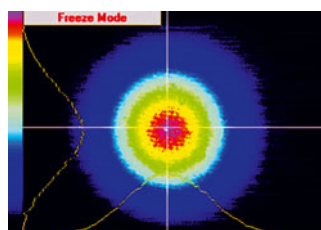
¹⁾ At 500 Hz repetition rate.

²⁾ 8 hours after 5 seconds of warm-up time.

³⁾ Full angle at $1/e^2$.

⁴⁾ Specifications are subject to changes without advance notice.

Beam profiles of NL220 lasers



RELATED PRODUCTS

Nanosecond Diode Pumped Nd:YAG Lasers NL200 series

- Up to **2 mJ** at 1064 nm
- Variable up to **2.5 kHz** repetition rate
- **9 ns** pulse duration at 1064 nm



Nanosecond Q-switched diode pumped laser NL640 series

- **6 W** at 40 kHz
- **6–13 ns** pulse duration
- Variable repetition rate



Industrial grade Q-switched diode pumped Nd: YVO₄ laser NL15100 series

- Up to **100 kHz** repetition rate
- Up to **15 W** output power at 1064 nm
- **< 28 ns** pulse duration



Requests
for custom made
products
are welcome !

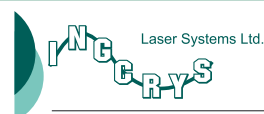


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