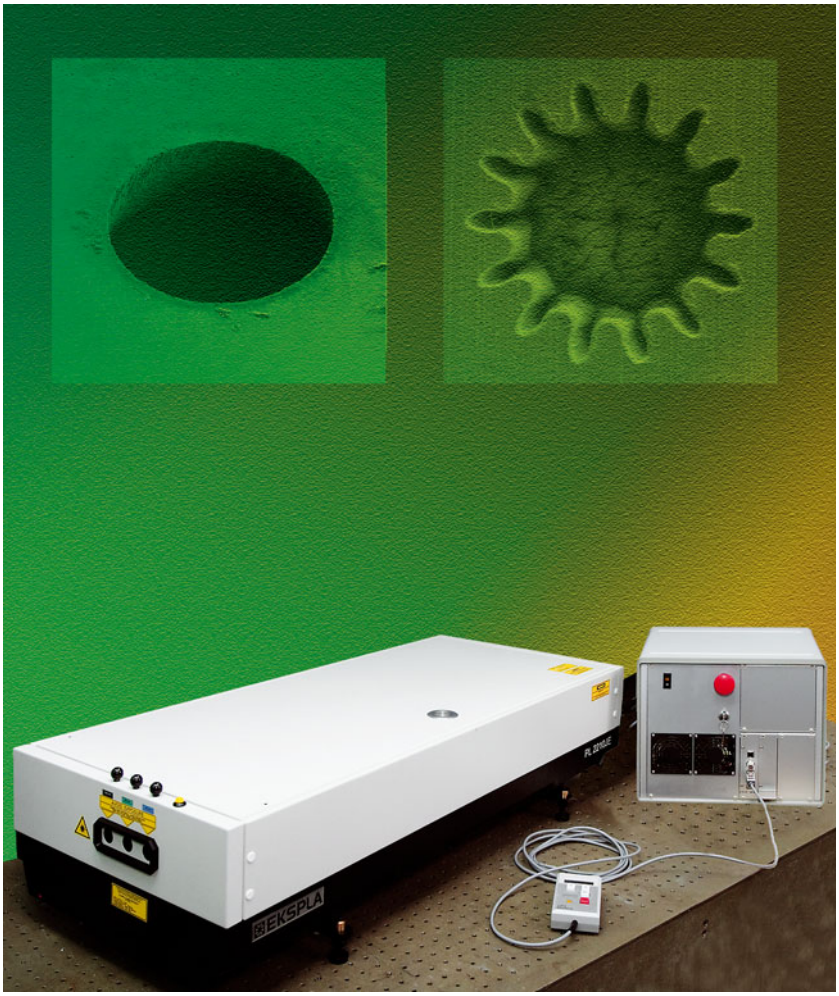
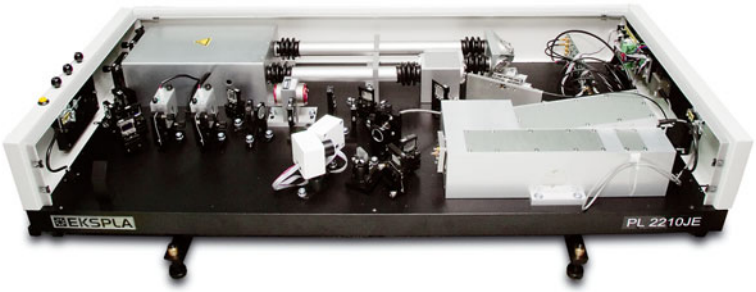
PL2210JE
MODEL

Diode Pumped Picosecond Nd:YAG Lasers



Diode-pumped Nd:YAG laser model PL2210JE delivers high peak power picosecond pulses at 2 kHz pulse repetition rate. Featuring mJ pulse at extremely **short < 20 ps** pulse duration and perfect synchronization with external devices, PL2210JE picosecond laser is an excellent cost-effective choice for specific material processing applications like **ablation with mask** or **laser deposition**.

EKSPLA uses regenerative amplifier end-pumping technique by fibre coupled laser diodes. This design **eliminates** any need for even **internal water cooling**. High pulse energy and short pulse width ensure efficient harmonic conversion to **532 nm, 355 nm and 266 nm**. Excellent energy stability combined with other wavelength options makes this laser a perfect source for **OPG/OPA pumping** as well as **spectroscopic** and other **scientific applications**. Mechanically stable design ensures reliable hands-free operation. The operating regime of laser pumping diodes ensures their long lifetime.



FEATURES

- High peak **power** at **multi kHz** repetition rates
- **< 20 ps** short pulse duration
- **All solid state** design
- **532/355/266 nm** wavelengths as standard option
- **Turn-key** operation
- **Air** cooled
- **Low** maintenance **costs**
- **Low jitter** internal/external synchronization
- Computer control via **USB** using **LabView drivers**
- **Remote** control **keypad**

APPLICATIONS

- Material processing
- Micromachining
- Pulsed laser deposition
- Resonant polymer deposition
- OPG/OPA pumping
- Time resolved fluorescence, absorption, pump-probe spectroscopy
- Characterization of optical materials
- Your application is welcome…

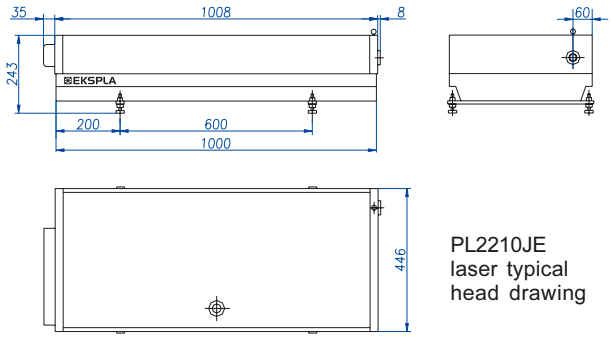
EKSPLA
An EKSMA Group Company

SPECIFICATIONS

MODEL	PL2210JE
Max. output energy, mJ at 1 kHz	
at 1064 nm	0.90
at 532 nm	0.35
at 355 nm	0.20
at 266 nm	0.15
Pulse energy stability (Std. dev), %	
at 1064 nm	1
at 532 nm	2
at 355 nm	3
at 266 nm	4
Pulse duration (FWHM), ps [1]	< 20
Pulse duration stability (Std. dev), % [1]	1
Max. repetition rate, Hz	2000
Spatial mode	TEM_{00}
Beam diameter, mm [2]	~ 2
Beam divergence, mrad [2]	< 1
M^2 [2]	< 1.5
Contrast ratio (to residual pulse) [1]	> 200:1
Polarization [1]	linear, vertical
Polarization ratio [1]	> 100:1
Optical pulse delay, ns [3]	200–300
Optical pulse jitter (Std. dev), ns [3]	< 0.25
PHYSICAL CHARACTERISTICS	
Laser head size (W×H×L), mm	446×243×1051
Electric cabinet size (W×H×L), mm	365×289×365
OPERATING REQUIREMENTS	
Relative humidity (non-condensing), %	5–80
Operating ambient temperature, °C	15–30
Voltage	100–240 VAC, single phase 50/60 Hz
Powering, W	600

[1] *At 1064 nm.*
[2] *At $1/e^2$ level at 1064 nm.*
[3] *With respect to sync-out pulse.*

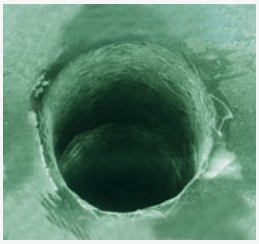
Specifications are subject to changes without advance notice.



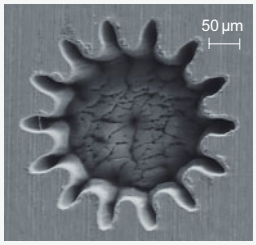
PL2210JE laser typical head drawing

MICROMACHINING SAMPLES

Hole made in 200 µm thickness stainless steel. Hole diameter – 500 µm.



200 µm through-out hole made in diamond



Structured gear wheel in molybdenum

RELATED PRODUCTS

Nanosecond Q-switched Diode Pumped Lasers
NL200 SERIES

- Up to **2 mJ** pulse energy
- **~ 9 ns** pulse duration at **1064 nm**
- Up to **2500 Hz** variable repetition rate
- Extremely **compact** size
- **Air cooled**

Industrial Grade Picosecond Diode Pumped Laser
PL10100 SERIES

- Up to **~ 200 µJ high** pulse energy
- Up to **100 kHz** repetition rate
- **Short** pulse duration **~10 ps**
- **10 W** output power at **1064 nm**

Industrial Grade Q-switched Diode Pumped Nd:YVO_4 Lasers
NL15100 SERIES

- Up to **100 kHz** repetition rate
- Up to **15 W** output power at 1064 nm
- **< 28 ns** pulse duration
- **532, 355** and **266 nm** wavelength options

Requests for custom made products are welcome.

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