

# PL2241

## SERIES

### High Energy Picosecond Nd:YAG Lasers

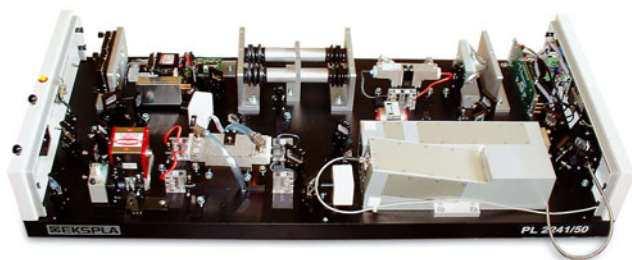


Unique rugged and compact design establishes PL2241 series picosecond lasers as versatile tool for research applications.

The heart of the system is diode pumped master oscillator placed in hermetically sealed monolithic block. Combined, the DPSS master oscillator and flash lamp pumped regenerative amplifier offer reliable performance and hands free operation.

Up to 250 Hz repetition rate speeds up data acquisition and processing in spectroscopic systems.

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



#### APPLICATIONS

- OPG pumping
- Nonlinear spectroscopy
- SFG/SHG spectroscopy
- Material research
- Time resolved spectroscopy
- Remote laser sensing
- Satellite ranging
- Other spectroscopic and nonlinear optics experiments
- Your application is welcome...

#### FEATURES

- Up to **100 mJ** per pulse at 1064 nm
- **< 35 ps** pulse duration
- Excellent pulse duration stability
- Up to **250 Hz** repetition rate
- Streak camera triggering option with **< 0.1 ns** optical jitter
- Hermetically sealed **DPSS** master oscillator
- Excellent beam pointing stability
- Thermo stabilized second, third or fourth harmonic options
- **PC control** by RS232 and LabView drivers
- Remote control via keypad

## SPECIFICATIONS

MODEL	PL2241	PL2241A	PL2241/50	PL2241B	PL2241C <sup>1)</sup>
Pulse energy, mJ					
at 1064 nm	4	50	30	80	100
at 532 nm	1.8	25	15	40	50
at 355 nm	1.2	12	8	20	25
at 266 nm	0.7	7	5	10	12
Pulse energy stability (StDev), %					
at 1064 nm			3		
at 532 nm			4		
at 355 nm			5		
at 266 nm			6		
Pulse Duration (FWHM), ps			< 35		
Pulse Duration Stability, % <sup>2)</sup>			1.0		
Contrast Ratio <sup>4)</sup>			> 200:1		
Polarization <sup>4)</sup>			linear, vertical, > 100:1		
Beam Diameter, mm	~ 4	8	6	10	12
Max. Repetition Rate, Hz	250	50	50	20 <sup>3)</sup>	10 <sup>3)</sup>
Optical Pulse Delay, ns <sup>5)</sup>			~ 400		
Optical Pulse Delay, ns <sup>6)</sup>			~ 500		
Optical Pulse Jitter, ns <sup>7)</sup>			0.25		

### PHYSICAL CHARACTERISTICS

Laser head size (W×H×L), mm	445×260×1020	445×260×1020	445×260×1020	445×260×1670	445×260×1670
Electric cabinet size (W×H×L), mm	550×835×600	550×835×600	550×835×600	550×835×600	550×835×600
Umbilical length, m			2.5		

### OPERATING REQUIREMENTS

Water Consumption (max. 20 °C), l/min			< 8		
Room temperature, °C			15-30		
Relative humidity (noncondensing), %			20-80		
Voltage			200 V, 3 phase, 50/60 Hz		
Power, kVA	< 2.5	< 3	< 3	< 3	< 3

<sup>1)</sup> Preliminary

<sup>3)</sup> Higher rep rates are available

<sup>5)</sup> With respect to Sync. pulse

<sup>7)</sup> With respect to Sync.pulse (StDev).

Specifications are subject to changes

<sup>2)</sup> At 1064 nm (St.Dev)

<sup>4)</sup> At 1064 nm

<sup>6)</sup> With respect to Sync. out syncpulse

With pre-trigger option is <0.1 ns

without advance notice.

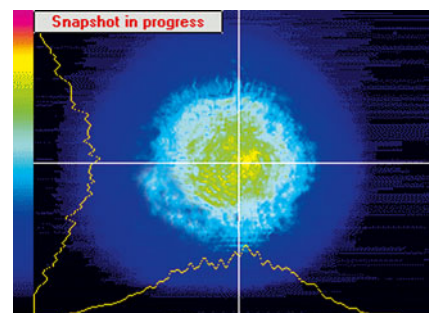
## RELATED PRODUCTS

### High energy picosecond mode-locked Nd:YAG lasers PL2140 SERIES

- Up to **110 mJ** per pulse at **1064 nm**
- **All solid-state mode locking**
- ~ **30 ps** pulse duration
- **10 or 20 Hz** repetition rate
- Excellent pulse energy (< **1.5%**) and duration (< **1.0%**) stability
- < **0.1 ns** optical jitter

### Diode pumped picosecond mode-locked Nd:YAG lasers PL2200 SERIES

- High energy at **kHz** repetition rates
- All **solid state** design
- TEM<sub>00</sub> shape beam
- 532/355/266 nm wavelengths available
- **Compact** size
- **Low maintenance costs**



Typical beam profile of PL2241 series lasers



Requests for custom made products are welcome !

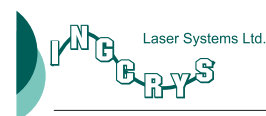


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