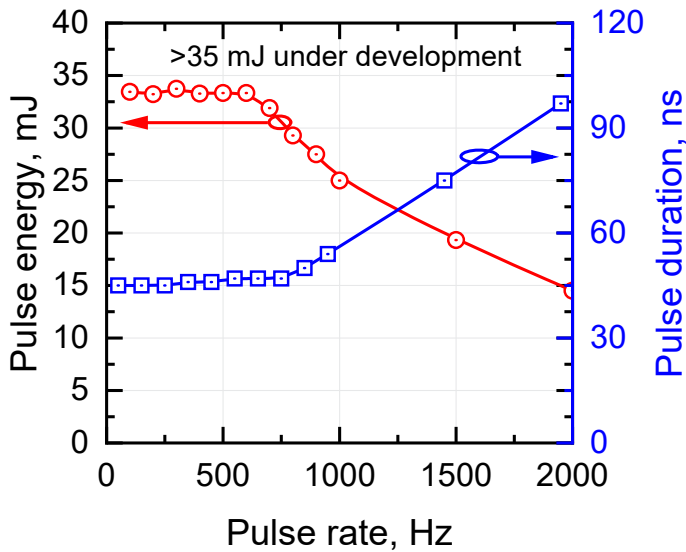
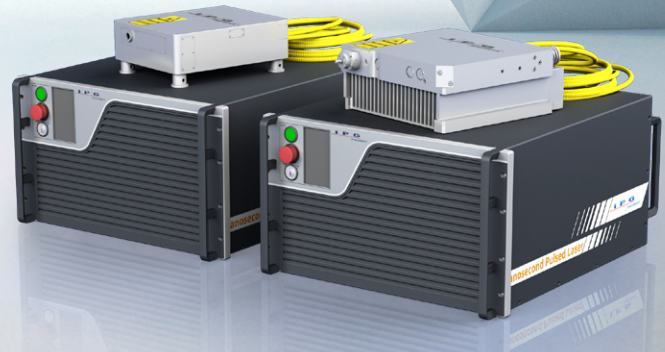


ELPN-1645 SERIES

Er:YAG Nanosecond Pulsed Lasers



Sample output energy vs pump power characteristics for different repetition rates of ELPN-LRR



ELPN Erbium:YAG nanosecond pulsed laser provides 25-200 ns pulses at 1.645 μm with pulse energies up to 35 mJ and output powers up to 25 W. Low and high repetition rate modifications operate over 0.01-2 kHz and 2-100 kHz frequency ranges, respectively. The acousto-optically Q-switched Er:YAG head is pumped by IPG efficient and reliable erbium fiber laser. The Er:YAG-1645 pulsed laser addresses lidar remote sensing, range-finding, track illumination, materials processing, marking, resistor trimming, as well as scientific and medical applications. Higher average powers, pulse energies and other options are available upon request.



FEATURES

- ▶ Output Power up to 25 W
- ▶ Pulse Energy 1-35 mJ
- ▶ Variable Pulse Width Option
- ▶ Single-frequency Option
- ▶ TEM₀₀ Beam Mode
- ▶ 1617 nm Operation Option
- ▶ Energy Amplification Option
- ▶ Repetition Rate 0.01 -100 kHz



APPLICATIONS

- ▶ LIDAR/Remote Sensing
- ▶ Track Illuminator
- ▶ Range Finder
- ▶ Medical Applications
- ▶ Material Processing
- ▶ OPO Pump Source

ELPN-1645 SERIES

Er: YAG Nanosecond Pulsed Lasers

| Optical Characteristics | ELPN-1645-15-50-15-LRR (AC or WC) | ELPN-1645-4-50-20-HRR (AC or WC) |
|---|------------------------------------|----------------------------------|
| Mode of Operation | Acousto-optically Q-switched | |
| Wavelength, nm | 1645, 1617 | |
| Linewidth FWHM, nm | <0.5 nm | |
| Maximum Average Power, W | 25 | 25 |
| Maximum Peak Power, kW | 1000 | 200 |
| Maximum Pulse Energy*, mJ | 35 | 5 |
| Pulse Duration, ns | 30-100 | 25-220 |
| Repetition Rate**, kHz | 0.01-2 | 2-100 |
| Polarization | Linear, >100:1 | |
| Output Beam Mode, M ² | ≤1.2 | |
| Beam Diameter (FW, 1/e ²), mm | 1.5 | |
| Warm-up Time, min | 5 from standby, 15 from cold start | |

* Output energies >35 mJ are available upon request.

** Custom repetition rates are available upon request.

General Characteristics

| | |
|---|--|
| Pump Laser Cooling | Air-cooled |
| Pump Laser Dimensions (W × D × H), mm | 448 × 420 × 268 |
| Optical Head Cooling | Air-cooled or water-cooled |
| Optical Head Dimensions (W × D × H), mm | 270 × 300 × 110 (air-cooled) 260 × 206 × 72 (water-cooled) |
| Supply Voltage 50-60 Hz, VAC | 110-240 |
| Power Consumption, W | 100-800 |



+1 (508) 373-1100;

IPGPhotonics.com/contact

www.ipgphotonics.com

MAX. AVERAGE OUTPUT POWER: 50 W
 MAX. PEAK OUTPUT POWER: 2 MW
 PULSE DURATION: 20-250 ns
 PULSE REPETITION RATE: 0.01-120 kHz
 WAVELENGTH RANGE: 1600-1700 nm

DANGER - INVISIBLE LASER
 RADIATION AVOID EYE OR SKIN
 EXPOSURE TO DIRECT OR
 SCATTERED RADIATION
 CLASS 4 LASER PRODUCT

IEC 60825-1:2014

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