

## Features & benefits

### High pulse energy

As high as 30μJ

### High average power

To 400mW

### Excellent beam quality

Gaussian, TEM00,  $M^2 \leq 1.3$

### Efficient, air cooled

Typically dissipates <10W from laser head and consumes <20W

### Long life

High reliability pump diode, specialty optics, and sealed package contribute to lifetimes expected to exceed 5k hours (consult factory for details)

### Licensed Technology

Exclusive license on passively Q-switched microchip laser: US Patent 5394413

## Optional features

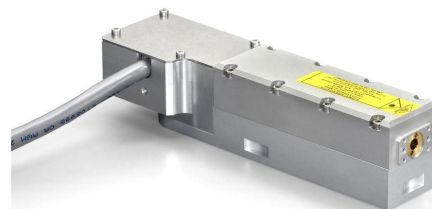
### User control of repetition rate for varying average power

- From 100% to a fraction of free running frequency
- RS232 ( $\leq 100$ ms delay) or analog input

### Manual controls for CDRH compliance

## 1064nm Passively Q-Switched Nd:YAG lasers: hundreds of mW average power, adjustable

Identical in package size to picosecond microchip lasers, longer pulsed passively Q-switched (PQS) nanosecond lasers provide far more power. Incorporating a proprietary Nd:YAG engine pumped by a high power diode, these compact lasers generate hundreds of milliWatts at 1064nm. The SNP-400P produces 400mW; the SNP-30E emits over 30μJ per pulse; the SNP-7PW optimizes between pulse energy and average power, delivering 21μJ per pulse and 350mW. The SNP series, which comes standard with a MLC-03A-xR0 controller, emits pulses at its free running PQS repetition rate; when used with the optional MLC-03A-DR2 controller, these laser can emit at frequencies from 100% down to a fraction of their free running speeds (actual fraction depends on the application and laser model selected and must be determined in consultation with factory). This optional control allows the user to adjust the average power, as is often required in material processing applications.



Identical in package size to picosecond microchip lasers, longer pulsed passively Q-switched (PQS) nanosecond lasers provide far more power. Incorporating a proprietary Nd:YAG engine pumped by a high power diode, these compact lasers generate hundreds of milliWatts at 1064nm. The SNP-400P produces 400mW; the SNP-30E emits over 30μJ per pulse; the SNP-7PW optimizes between pulse energy and average power, delivering 21μJ per pulse and 350mW. The SNP series, which comes standard with a MLC-03A-xR0 controller, emits pulses at its free running PQS repetition rate; when used with the optional MLC-03A-DR2 controller, these laser can emit at frequencies from 100% down to a fraction of their free running speeds (actual fraction depends on the application and laser model selected and must be determined in consultation with factory). This optional control allows the user to adjust the average power, as is often required in material processing applications.

## 1064nm SNx Lasers (typical values)

Model	SNP-30E	SNP-7PW	SNP-400P
Energy/Pulse (μJ)	33	21	15
Repetition rate (kHz)	5	16	28
Average Power (mW)	180	350	420
Pulse Width (ns)	8	6	10

## Applications

- Material processing
  - Marking
  - Graphitization
- Biophotonics
- Instrumentation