

## Features & benefits

### Ultrashort pulses

As low as 300ps durations

### High peak power

Exceeding 6kW per pulse

### Variety of frequency options

Free running to 40kHz  
Fixed frequency to 4kHz  
Triggerable to 2kHz

### Excellent beam quality

Gaussian, TEM00,  $M^2 \leq 1.3$   
(355nm and horizontal 266nm)

### Efficient, air cooled

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

### Long UV life

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

### Licensed Technology

Exclusive license on  
Passively Q-switched pico-  
second microchip laser:  
US Patent 5394413

## Optional features

Photodiode output for  
synchronization

Manual controls for  
CDRH compliance

## 355nm passively Q-switched lasers: 40kHz, fixed frequency, triggered versions

For generating high peak power ultraviolet pulses of a few hundred picoseconds, microchip lasers are economical, compact, and reliable. Microjoule 355nm UV pulses are generated from the harmonic conversion of the emissions from a passively Q-switched Nd:YAG microchip engine. The SNV series are proposed in 2 packages for better flexibility and are designed for high average power, either from pulse energies as high as 2µJ or from free running repetition rates up to 40kHz; the SFV series allow users to select up to three fixed frequencies, set at the factory, from 10Hz to 4kHz; the STV series enable the user to trigger the laser on demand, varying the period from 100ms to 500µs, pulse to pulse.



### Ultra Violet 355nm SxV lasers (typical values) – Package A

Model	SNV-05P
wavelength (nm)	355
Peak Power (kW)	1.8
Average Power (mW)	6
Repetition rate (kHz)	8
Pulse width (ps)	400
Energy/Pulse (µJ)	0.8

### Ultra Violet 355nm SxV lasers (typical values) – Package B

Model	SNV-02E	SNV-20F	SNV-40F	SFV-01E	STV-01E
Pulse Width (ps)	400	400	400	300	300
Energy/Pulse (µJ)	2.5	0.8	0.25	1.2	1.2
Peak Power (kW)	6	2	0.6	4	4
Repetition rate (kHz)	6	21	40	0.01-4	0.01-2
Average Power (mW)	13	16	7	≤4.8	≤2.4

## Applications

- ▶ Laser-induced fluorescence (LIF)
- ▶ Micro dissection
- ▶ Organic compound marking and micromachining
- ▶ Biohazard detection
- ▶ Time resolved fluorescence
- ▶ Laser Induced Breakdown Spectroscopy (LIBS)
- ▶ Semiconductor inspection