

EXTERNAL RESONANT SHG FIBER LASER

High Power, Narrow Linewidth, Low RIN, Mode-hopping Free, Active Power Stability, Excellent Beam Quality

PreciLasers offers external resonant SHG fiber laser, which uses ultra-narrow linewidth fiber DFB laser as seed, all fiber amplifiers to boost the output power and external resonant SHG cavity to get high power visible or UV lasers. The output laser wavelengths cover from 253 to 795 nm with a SHG efficiency of up to 80% and output power of up to 30W.

The product has the properties of high output power, optional narrower linewidth (less than 20 kHz in 100 us integration time), tunable and optional low relative intensity noise.

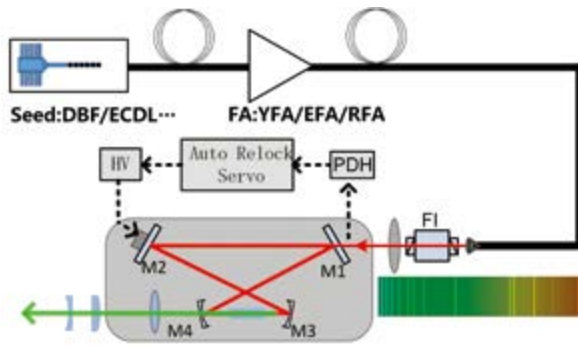


Key Features:

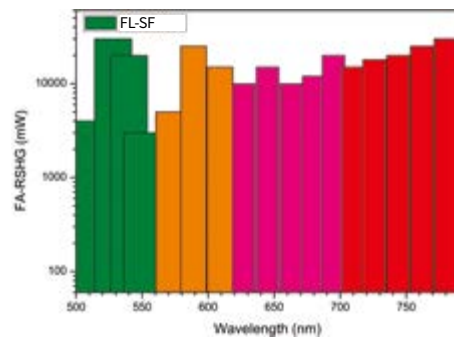
- Narrow Linewidth, tunable
- High output power
- Low intensity noise
- Good Beam Quality ($M^2 < 1.1$)

Applications:

- Pump laser for Ti:Sapphire
- Pump laser for OPO
- Optical Lattice
- Optical tweezer



Laser Configuration

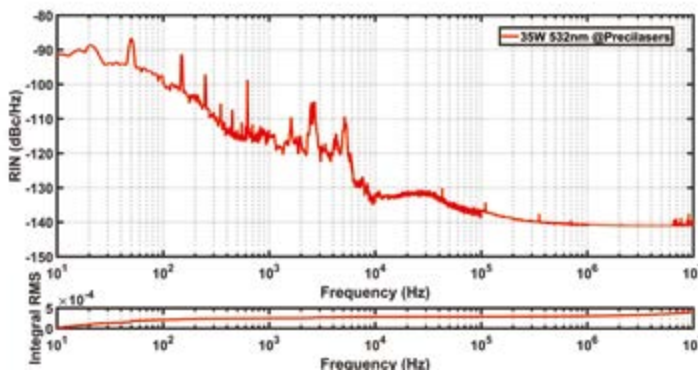


Wavelength-Power

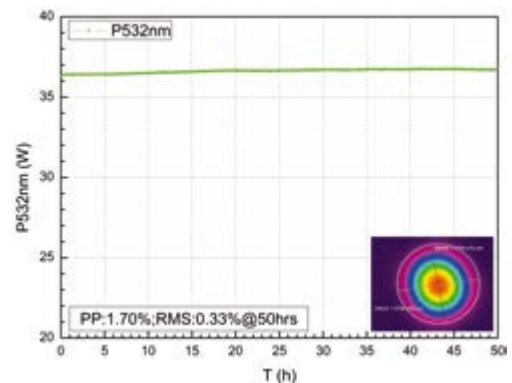


PreciLasers offers external resonant SHG fiber laser, which uses ultra-narrow linewidth fiber DFB laser as seed, all fiber Yb-doped amplifier to boost the output power and external resonant SHG cavity to get high power, narrow linewidth, low intensity noise and high efficiency 532 nm laser.

This laser has the characteristics of large output power, narrow linewidth (Lorentz linewidth <10 kHz), low intensity noise, and has been used in customers' optical lattice experiments.



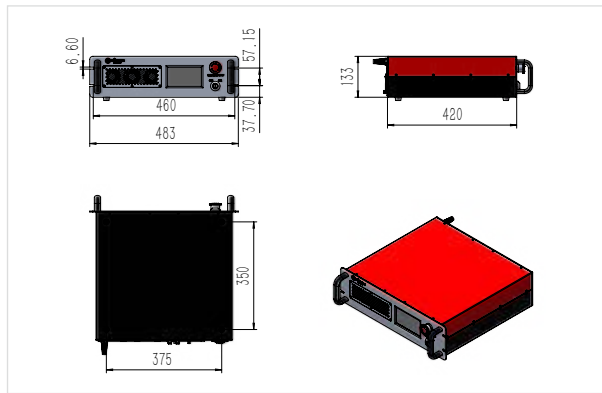
Relative Intensity Noise



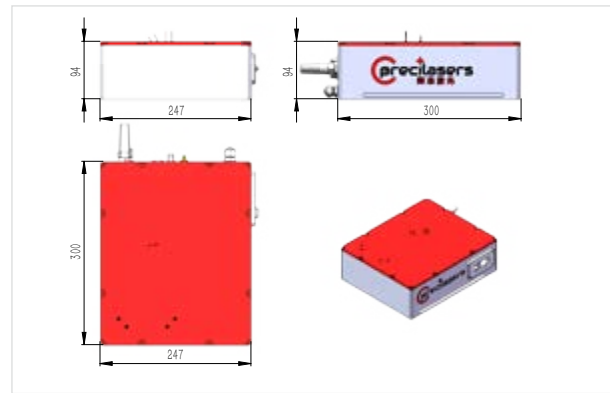
Beam Profile and Power Stability

Model	FL-RSHG-532-YY-ZZ ¹	
Output Power ² , W	35	
Seed Laser	Precilasers' Fiber DFB Laser	Low Noise Diode Laser
Amplification	Low Noise Fiber Amplifier	
Frequency converted	External Resonant SHG	
Tuning Range, GHZ	>400	10
Linewidth, kHz	<20	<20
RMS Power Stability, %	< 0.5%@3hrs	
Relative Intensity Noise	RMS Integration: <0.1%(10Hz-10MHz)	RMS Integration: <0.05%(10Hz-10MHz)
Beam Quality	TEM ₀₀ , M ² <1.1	
PER, dB	>20	
Beam Diameter, mm	0.7-1.0	
Cooling	Water Cooling/Air Cooling	
Power Supply	50-60Hz, 100-240VAC	

1:YY: Maximum Output Power, ZZ: Operation Mode
 2: Power can be customized



1064 nm fiber laser



532 nm SHG Module