

► Er-Doped Single-Pass SHG Fiber Laser

Narrow Linewidth, Low Frequency Drift, Mode-hopping Free, Active Power Stability, Excellent Beam Quality

Precilasers provides narrow-linewidth, mode-hopping free, frequency-doubled single frequency lasers from 765 to 798 nm, based on Er-doped fiber lasers (EFL-SSHG). It consists of an all-fiber amplifier seeded with single frequency fiber DFB laser, and a single-pass frequency doubling unit with PPLN/PPSLT crystal. Compared with frequency-doubled diode laser, the fiber solution has stable configuration, excellent beam quality ($M^2 < 1.1$), high output power (up to 10 W) and low intensity noise (RIN < 0.06% from 10 Hz-10 MHz). It remains mode-hopping-free and stable under wide temperature variation and high mechanical vibration.

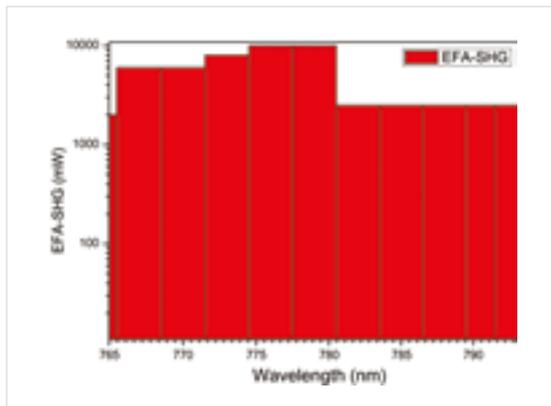


Key Features:

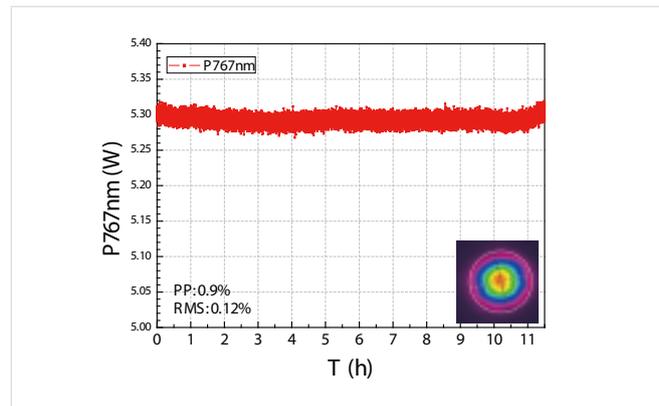
- Narrow Linewidth (<20 kHz)
- Support Seed built-in, Tunable
- Stable and Maintenance-free
- Good Beam Quality ($M^2 < 1.1$)
- Mode-Hopping Free

Applications:

- Rb atom cooling
- Magic optical lattice
- Atom interferometry
- Atom clock



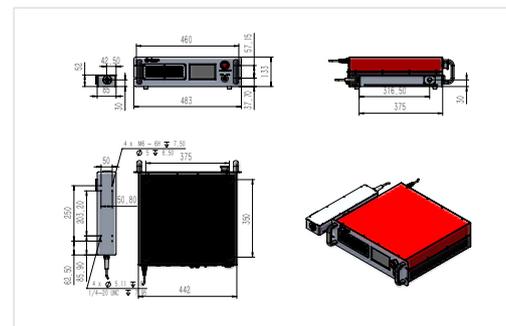
Wavelength-Power



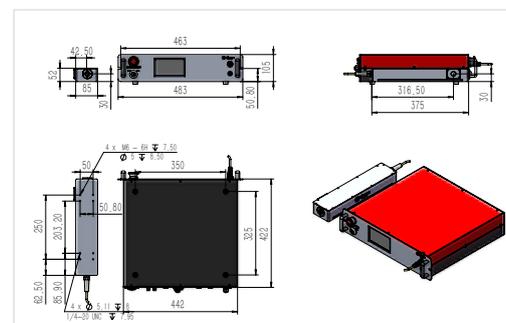
Beam Profile and Power Stability

Model	EFL-SSHG-XX-YY-ZZ ¹			
Wavelength Range ² , nm	767	770	780	790-798
Output Power ³ , W	5	7	2	7 15 0.2 2 4
Seed Laser	Precilasers' DFB laser		Low Intensity Noise Diode Laser	
Frequency converted	Single Pass SHG			
Fast Tuning Range, GHz	6		1	
Slow Tuning Range, nm	>200		>20	
Linewidth (100 us), kHz	<5		<20	
RMS Power Stability, %	0.3% @ 3hrs			
Relative Intensity Noise, (10Hz-10 MHz Integration)	<0.1%		<0.05%	
Beam Quality	TEM ₀₀ , M ² < 1.1			
PER, dB	>23			
Beam Diameter, mm	0.7-1.0			
Cooling	Water Cooling / Air Cooling			
Power Supply	50-60Hz, 100-240VAC			

1:XX: Central Wavelength, YY: Maximum Output Power, ZZ: Operation Mode
 2:The center wavelength can be customized;
 3: High power can be customized



Size for Air-cooling Version



Size for Water-Cooling Version