



Space output 780 nm single frequency laser



The product description

To meet the demands of the atomic physics and quantum physics based on Rb atom, Erbium group has developed space output 780 nm laser with maximum power of 15W using frequency doubling technique. Due to Handling, low drift, anti-vibration and other excellent environmental adaptability, EFA-SSHG-780nm has been used in our laboratory experiments of Rb atom interferometer and has been frequency stabilized with saturated absorption spectrum for several months.

Product features

- Narrow linewidth < 20 kHz (as low as 2 kHz)
- Optional low intensity noise (RIN < -130 dBc/Hz @ 100 kHz)
- High power (15 W)
- Excellent beam quality ($M^2 < 1.1$)
- Power stability (P-P < 1% @ 25°C, < 2% @ 15-35°C)
- Environmental stability (15-35°C, 0.5 Grms (0-200 Hz))
- Rb atom
- Magic light lattice

Technical indicators

Model	EFA-SSHG-780-X (Single output)				EFA-SSHG-780-X (two channel output)	
Central Wavelength ¹	780.24 nm					
Power	15W	7W	2W	0.2W	3W	400mW
					3W	400mW
Frequency difference between two channels					0-1.2 GHz (single seed laser)	
Laser linewidth	< 20 kHz				< 4 kHz (Optional)	
Mode-hop free tuning range ²	0.4 nm					
Fast tuning range ²	10 GHz					
Fast tuning bandwidth ²	> 10 kHz					
Frequency stability ²	100 MHz @ 25°C					
Operation Environment	Temperature: 15-35°C					
	Vibration: 0.5 Grms (0~200Hz)					
RMS integration of relative intensity noise (10Hz-10 MHz)	< 0.2%				Low noise option ³ RMS integration value: < 0.05% (10Hz-10 MHz)	
Beam Quality	TEM ₀₀ , M ² < 1.1					
Polarization	Linear polarization, > 100: 1					
Cooling	Air Cooling/Water Cooling					
Power dissipation	< 200 W					

¹ Can be Customed; Custom range 765-790 nm



2 Depending on the seed laser, the seed laser can be external

3 Low noise seed can be selected for low noise

Structure size

