



## Fiber 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 fiber output 780 nm laser with maximum power of 2W using waveguide 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 (2W)
- 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

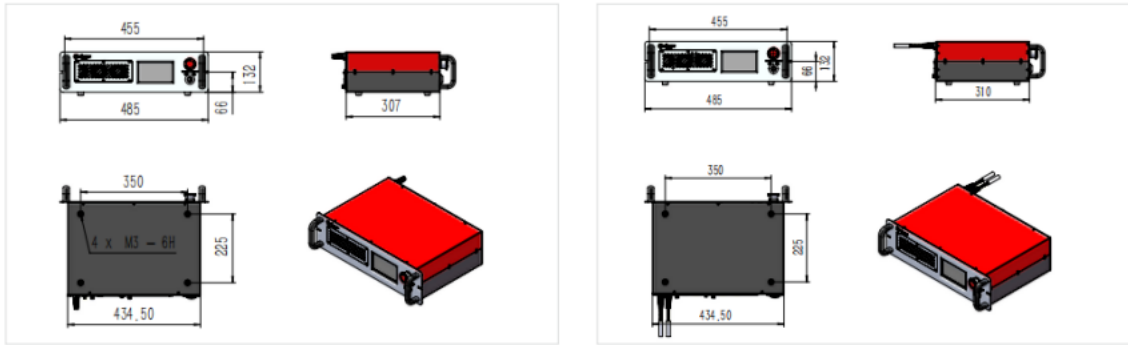
### Technical indicators

Model	EFA-SSHG-780-X(Single)		EFA-SSHG-780-X-X(Two channels)	
Central Wavelength <sup>1</sup>	780.24 nm			
Power	2W	0.2W	2W	400mW
			2W	400mW
Frequency difference between two channels			0-1.2 GHz (single seed laser)	
Laserlinewidth	< 20 kHz		< 2kHz(Optional)	
Mode-hop free tuning range <sup>2</sup>	0.4 nm			
Fasttuning range <sup>2</sup>	10 GHz			
Fasttuning bandwidth <sup>2</sup>	>10 kHz			
Frequency stability <sup>2</sup>	100 MHz @25°C			
RMS Power Stability, %	<0.3% RMS @25°C @3hrs			
Operation Environment	Temperature: 0-50°C			
	Vibration: 0.5 Grms(0~200Hz)			
RMS integration of relative intensity noise(10Hz-10 MHz)	<0.2%		Low noise option <sup>3</sup> RMS integration value: <0.05% (10Hz-10 MHz)	
Output fiber	PM780 Fiber, Collimating output or FC/APC output			
Polarization	Linear polarization , > 100: 1			
Cooling	Air Cooling/Water Cooling			
Power dissipation	<200 W			
1 Can be Costumed ; Custom range 765-790 nm				
2 Depending on the seed laser,the seed laser can be external				



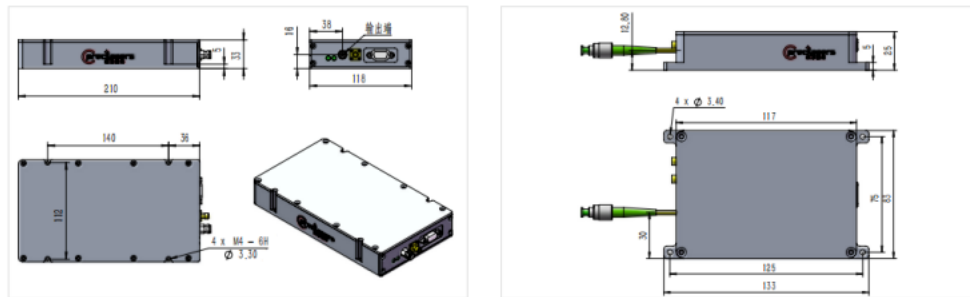
3 Low noise seed can be selected for low noise

### Structure size



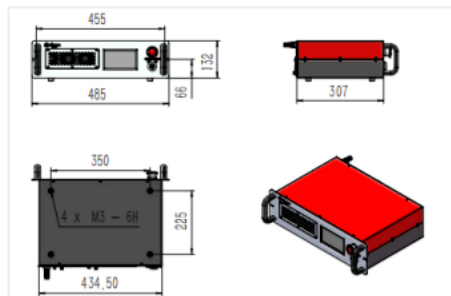
### 780 nm single frequency laser EFA-SSHG-780

### Structure size

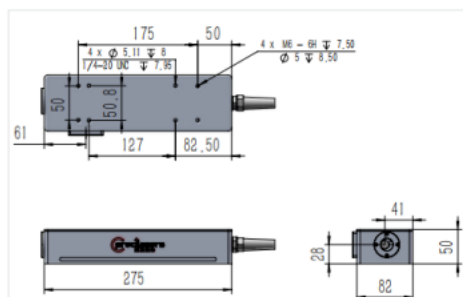


1560 nm Fiber DFB seed laser size-I

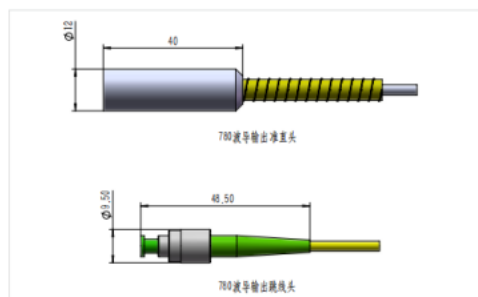
1560 nm Mode-hopping diode seed laser size-II



1560 nm Er-doped fiber amplifier size



780 nm single channel frequency doubling module size



780 nm double frequency doubling module size