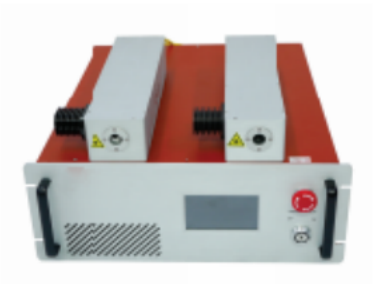
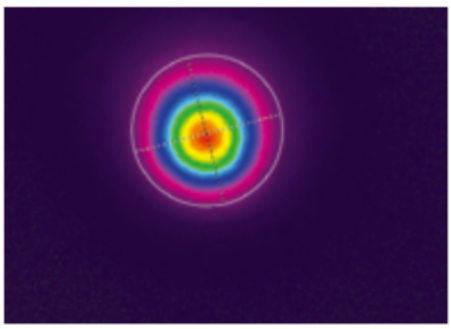
Frequency hopping 589 nm fiber frequency doubling laser

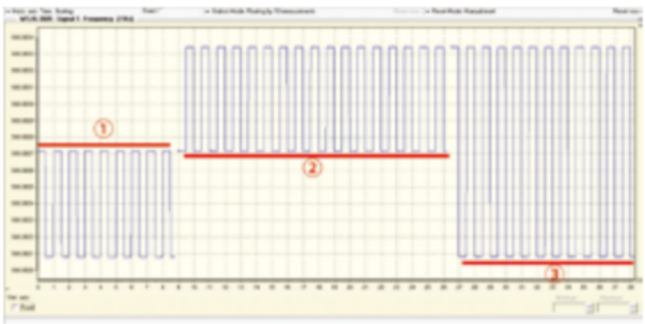


The product description

A fast frequency hopping Raman fiber single-pass frequency doubling laser (RFA-SSHGJF) was developed by Erbium group to meet the demand of sodium lidar for frequency converted of 589 nm laser. Adopting ultra-narrow linewidth ECDL as seed source, Utilizing high speed modulator for frequency hopping, adopting all-fiber Raman amplifier for enhancing laser power and single passing periodic polarization crystal, Erbium group obtains the high power frequency doubling laser with frequency hopping. This product can achieve two 589 nm laser outputs. One is used to lock the laser to the sodium atomic absorption line at a constant frequency. The other laser support f+ 630MHz, F +0 MHz, F-630mhz fast switching. The laser power can reach more than 1.8 W, which perfectly matches the demand of sodium lidar seed source.



The first channel 589 nm laser spot, the size of the spot is about 0.95 mm which is from the output window 30 cm.



589 nm output laser frequency fast switching test. The three frequency modulation test. ①: F-630MHz and 0 MHz jump; ②: F +630 MHz and 0 MHz jump; ③: f±630 MHz jump each other.

Technical indicators

Model	RFA-SSHG-589-2[1]
Central wavelength, nm	589
Output Power[2] , w	One >1.8 W;the other >10 mW
Linewidth, kHz	＜ 200
Frequency hopping requirements	Modulation frequency 0-100Hz, frequency hopping time synchronization with th pump laser through the external TTL control; The 589 nm frequency shift is ±630 MH after frequency hopping. Frequency hopping interval: < 1us.
Pulse extinction ratio, dB	>50
No jump mode tuning range, GHz	>40
Totaltuning range, nm	±1
RMS power stability	<0.5 %@3hrs
Beam Quality	TEM_{oo} , M^2 <1.1

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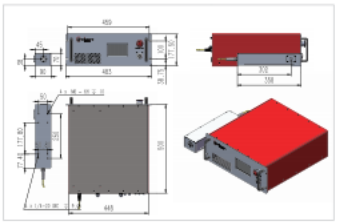
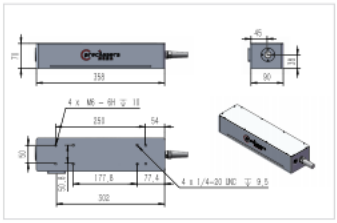
PER, dB	>20
Working mode	CW
Cooling	Water Cooling/Air Cooling
Power Supply	50-60Hz , 100-240VAC
1: Maximum output power 2: Costumed for higher output power	

Structure size





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