



## Celius SF Product Line

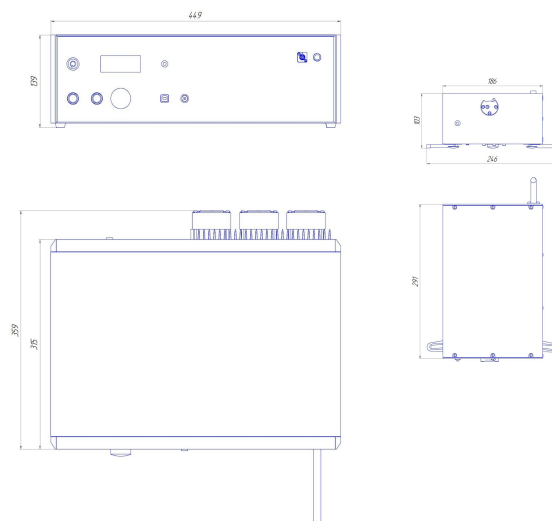
### Single Frequency CW 780 nm fiber Laser Celius-SF-780 series

#### Key features

- Single Frequency
- Ultra Narrow linewidth (<1 kHz)
- Wavelength 780 nm
- Output power ( 100 - 500 mW)
- Superior beam quality ( $M^2 < 1.05$ )
- High power stability
- Thermal wavelength tuning
- Low noise

#### Application

- Atom cooling and trapping;
- Spectroscopy;
- Atomic lithography
- Interferometry
- Rb atoms manipulation



Cellius-SF-780 is a single frequency low noise 780 nm fiber laser based on a proprietary technology for an intra-cavity doubling of the unpolarised Er-doped fiber laser with the linearly polarized red output (patent pending). SF series key parameter is ultra narrow linewidth (< 1 kHz) based on longitudinal single mode. Cellius is controlled by the onboard digital display, switches, and adjustment controllers. Cellius comes with a piezoelectric tuning with internal and external wavelength modulation at kHz bandwidth for locking purposes. A full set of control electronics and power supply are included to the delivery package. The control interface software provides optionally. This is a perfect tool for research labs due to excellent performance, high reliability, and lower cost.

## Cellius-SF-780-L series specification

Parameter	Value	Unit
Operating mode	CW, Single frequency	
Central wavelength	780	nm
<b>FWHM</b>	< 10 (<1,0)	kHz
Nominal output power	100, 200, 500	mW
Output power tunability	20-100%	%
Power stability	< ± 1	%
RIN noise	RIN peak - app. 0.3 MHz, RIN level - <-100 @ peak	
Polarization	Linear	
Fast piezo tuning	available	
Piezoelectric Modulation Frequency	up to 15	kHz
Thermal tuning range	0,2	nm
Beam quality (M <sup>2</sup> )	≤ 1.05	
Control interface	Front panel with display, RS232 (optional), USB (optional)	
Operating voltage	220 -240 Volt, 50 -60 Hz, Single Phase	
Operation temperature	10 to 40	°C
Storage temperature	- 40 to +70	°C
MTBF	> 10,000	Hrs
Operation Humidity	10 - 85	%
Cooling	Forced air	
Dimensions (WxHxL)	449x139x359 , 246x103x186	mm
Weight	≤ 12	kg

- Optromix fiber laser systems can be customized by request.
- Optromix fiber laser systems are under 1 year warranty.



### Ordering Information

Product Code	<b>Cellius SF-780-yyy-p</b>	xx:	Wavelength (nm)
		yyy:	Output power (mW)
		p:	Polarization: R - random, L - linear

Information in this document is subject to change without notice.

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