CONNET LASER TECHNOLOGY

CoSF SERIES

CoSF-D-ER-B-HP1

CoSF-D-EY-B-HP1

Features:

- Ultra-narrow linewidth
- Stable single-frequency & single polarization operation
- No mode hopping, No bursting noise
- Low phase noise and low relative intensity noise
- Flexible design, multiple wavelengths optional
- Linear polarization output, high PER

Applications:

- Optical fiber sensing
- LiDAR
- Microwave photonics
- Cold atom physics
- Laser spectroscopy
- Coherent communication
- Other scientific research

1.5um CoSF-D High Power Narrow Linewidth Single Frequency Fiber Laser (HP1)

Connet CoSF-D narrow linewidth single frequency fiber laser is a low-noise fiber laser independently developed by patented technology. It adopts the Distributed Feedback Bragg Grating (DFB) type fiber laser technology and has independent intellectual property to achieve stable linear polarization, single longitudinal mode and ultra-narrow linewidth single-frequency laser output. The unique Relative Intensity Noise (RIN) suppression technique guarantees the low noise operation of the CoSF-D narrow linewidth single frequency fiber laser.

Connet CoSF-D narrow linewidth single frequency fiber laser has excellent performance with the output optical spectrum linewidth of kHz level, the ultra-low frequency noise and intensity noise and the output optical signal noise ratio (OSNR) to be greater than 50dB.

CoSF-D-HP1 high power narrow linewidth single frequency fiber laser internally adopts MOPA design, based on CoSF-D basic module, integrates low noise fiber amplifier and high power double-clad Er/Yb co-doped fiber amplifier to achieve the output power up to 2W. For higher output power, please refer to the technical specifications of CoSF-D-ER-B-HP2/HP3.

Specifications:

Parameter	Unit	Specification	
Part no.		CoSF-D-ER-B-HP1	CoSF-D-EY-B-HP1
Center wavelength	nm	1530-1570	
Output power [1]	W	0.3 ~ 2.0	
Output laser type		CW, Single frequency & Single longitudinal mode	
Beam quality	M^2	<1.1	
Linewidth [2]	kHz	< 1	< 15
Relative intensity noise (RIN) Peak Frequency	MHz	0.5 ~ 0.8	0.5 ~ 0.8
Relative intensity noise (RIN) Peak	dB/Hz	<-100	<-120
Relative intensity noise (RIN)(>3MHz)	dB/Hz	<-135	<-140
OSNR, 50pm Resolution	dB	>45	>50
Output polarization		Linear Polarization	
PER	dB	>23	
Output power stability (RMS)	%	± 1	
Output isolation	dB	>50	
Output power adjustment range	%	30 ~ 100	
Wavelength thermal tuning [3]		Standard	
Wavelength thermal tuning range	nm	0.8	
Fast PZT modulation		Optional	
Piezo-electric tuning range (0-150V) [4]	GHz	8 ~ 10	
PZT modulation frequency	kHz	DC ~ 20	
Output fiber type		PM1550-XP	
Output fiber length	m	> 0.5	
Output connector		FC/APC	
Output fiber for monitor		Standard	
Output power for monitor	mW	>0.5	
Output fiber type for monitor		PM1550-XP	
Output fiber length for monitor	m	> 0.5	
Output connector for monitor		FC/APC	
Operating temperature	℃	+15 ~ +35	
Storage temperature	℃	0 ~ +50	
Operation voltage	V_{AC}	100-240, 50/60Hz	
Dimension		19"2U	

Specifications:

- 1.The output power is different at different working wavelengths.
- 2.The linewidth is based on self-heterodyne measurement with optical delay of 120us.
- 3.The thermal wavelength tuning range will change as the operating temperature changes.
- 4.The internal integrated PZT drive voltage is 10V with the typical PZT wavelength tuning range of 200-300MHz and the high voltage PZT driver needs to be externally connected.

Ordering information:

- CoSF-D-ER-B-HP1-15xx-<P>-FA
- CoSF-D-EY-B-HP1-15xx-<P>-FA
- <P>: Output Power Unit: W, e.g. 05-0.5W, 10-1.0W; 20-2.0W.

Options:

- PZT fast wavelength tuning function.
- External PZT high voltage driver

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