

## CoSF-D-Tm-B-LP Narrow Linewidth Single Frequency Fiber Laser

### Description:

Connet CoSF-D is a low-noise Single Frequency Fiber Laser based on Distributed Feedback Bragg Grating (DFB) technology. It has independent intellectual property rights and achieves a stable single-frequency laser output with single longitudinal mode, linear polarization, and narrow linewidth. CoSF-D has very low phase and frequency noise and low relative intensity noise (RIN). Connet uses unique packaging technology to ensure low-noise DFB single frequency fiber lasers with excellent wavelength stability.



CoSF-D-Tm-B-LP is a low power single frequency fiber laser based on Thulium-doped fiber with narrow linewidth (<15kHz) and low phase noise, low relative intensity noise (RIN). Output power ranges from 20mW to 100mW. The center wavelength is selectable in the 1900-2100nm range. Other wavelengths can be customized according to requirements.

### Features:

- Narrow linewidth <15kHz
- Low relative intensity noise (RIN)
- Stable single frequency, single polarization output
- No mode-hopping
- High reliability

### Applications:

- Frequency conversion
- Coherent LiDAR
- Laser spectroscopy
- Gas absorption measurement
- Other scientific research

### Specifications:

Parameter	Unit	Specification		
		Min	Typ.	Max
Part no.		<b>CoSF-D-Tm-B-LP</b>		
Center wavelength <sup>1</sup>	nm	1900-2100nm fixed, other specify		
Output power <sup>2</sup>	mW	20	-	100
Laser output		CW, Single frequency & Single longitudinal mode		
Beam quality	M <sup>2</sup>	-	1.05	1.1
Linewidth	kHz	-	10	15
RIN peak frequency	kHz	400	-	600
RIN peak	dBc/Hz	-	-120	-110
SMSR (50pm resolution)	dB	40	45	-
Output polarization		Linear		
Polarization extinction ratio (PER)	dB	18	20	-
Output power stability	%	-	±0.5	±1
Output isolation	dB	25	30	-
Wavelength thermal tuning	nm		0.6	0.8
PZT wavelength modulation		Optional		
Modulation frequency (linear)	kHz	DC	10	20
Modulation wavelength range	GHz	-	8	10
Operating temperature	°C	+15	-	+40
Storage temperature	°C	-20	-	+60
Power supply	V <sub>AC</sub>	100-240V, 50/60Hz		
Communication interface		RS232		
Output fiber type		Panda PM1950		
Output fiber length	m	> 0.5		
Optical connector		FC/APC		
Dimension	mm	430x450x105		
Weight	kg	<5		

### Note:

1. Typical center wavelength: 1940nm, 2050nm, Other wavelengths available.

2. The output power is optional. 20mW is fixed, 50mW and 100mW output power are adjustable.

### Ordering Information:

**CoSF-D-Tm-B-LP-<xxxx>-<PW>-PMF/SMF-PZT-FA**

xxxx: Center wavelength

PW: Output power, in Watt.

Options: 1. SMF output 2. Monitoring output 3. PZT fast modulation