

1550nm (1.5um)High Power Single Frequency narrow linewidth Fiber Laser



Description

The 1.5um high power single-frequency fiber lasers are featured by low noise and narrow linewidth. They are based on the self-developed single frequency laser basic module of Connet Laser. The high power output is achieved by multi-stage amplification and the maximum power can be up to 10W.

The 1550nm high power single frequency fiber lasers of Connet Laser employ optimized optical path, realize high power output, suppress nonlinear effects in the fiber effectively and obtain near diffraction-limited beam quality at the same time.

The 1.5um high power single frequency fiber laser with 10W output power and other output power can be customized. The center wavelength can be chosen freely in the 1535-1575nm range such as the standard wavelengths of ITU.

Feature

- Ultra narrow linewidth
- Stable single frequency & single polarization operation
- No mode-hopping, No out-bursting noise
- Low phase and intensity noise
- Flexible design, various wavelengths optional
- PM output, high PER

Application

- Fiber Optic Sensor
- LiDAR
- Sounding
- Laser spectroscopy
- Wavelength references
- Research & development

Specification

Parameter	Unit	Specification		
		Min	Typ.	Max
Part NO.		IDP-1550-B-SF-HP		
Center Wavelength ¹	nm	1540-1565nm(can be customized)		
Output power ²	W	0.5	-	10
Laser emission		CW, single frequency & single polarization		
Beam quality	M ²	<1.5		
Linewidth ³ (FWHM)	kHz	-	1	-
Side Mode Suppression Ratio(SMSR)	dB	30	50	-
Phase noise	Rad/rt(Hz)	TBD		
RIN peak	MHz	TBD		
RIN	dB/Hz	TBD		
Output polarization type		Linear polarization		
Polarization Extinction Ratio(PER)	dB	13	-	-
Output power stability(15min)	%	-	±0.5	±1.0
Output power stability(8hours)	%	-	±1	±2
Output light isolation	dB	35	-	-
Output power tunable range	%	10		100
Operating temperature	°C	-25	-	50
Storage temperature	°C	-40	-	85
Power supply	VAC	220		
Output fiber type		Panda LMA		
Length of the output type	m	> 0.5		
Optical connectors		FC/APC, Collimator		
Dimension	mm	19"2U or 19"3U		

- 1.The center Wavelength is selectable within the specified range. Other wavelength is available;
- 2.Output power is optional.
3. Lorentzian line shape with optical delay of 120us

Ordering Information :

IDP-15xx-B-<PW>-SF-HP

15xx:wavelength in nm,standard wavelength 1550nm

B:Benchtop

PW:Output power in W, example:0.5-0.5W,10-10W