

1.0um High Power Single-Frequency narrow linewidth Fiber Laser



Description

The 1.0um 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 50W.

The 1.0um 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 1.0um single frequency fiber laser with 50W output power and other output power can be customized. The center wavelength can be chosen freely in the 1000-1200nm range such as 1018nm, 1030nm, 1053nm, 1083nm, 1178nm etc.

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 optical sensing
- LiDAR
- Atomic trapping
- Laser spectroscopy
- Wavelength references
- Research & development

Specification

Parameter	Unit	Specification		
		Min	Typ.	Max
Part NO.		IDP-1064-B-SF-HP		
Center Wavelength ¹	nm	1000-1200nm		
Output power ²	W	0.5	-	50
Laser emission		CW, single frequency & single polarization		
Beam quality	M ²	<1.2		
Linewidth ³ (FWHM)	kHz	-	1	-
Side Mode Suppression Ratio(SMSR)	dB	30	40	-
Phase noise	Rad/rt(Hz)	TBD		
RIN peak	MHz	TBD		
RIN	dBC/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	170	220	260
Output fiber type		Panda LMA		
Length of the output fiber	m	> 0.5		
Optical connectors		FC/APC or 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.typtical power is 0.5W,2W,10W
3. Lorentzian line shape with optical delay of 120us

Ordering Information :

IDP-1xxx-B-<PW>-SF-HP

1xxx: Wavelength in nm, Standard wavelengths:1064nm, 1018nm, 1030nm, 1053nm, 1083nm, 1178nm etc.

B:Benchttop

PW:Output power in W, example:0.5-0.5W, 50-50W

Notes:

The output power may be different in various wavelengths, please contact us with what you need.