

1064nm(1.0um) Single-Frequency narrow linewidth Fiber Laser



Description

1.0um benchtop Single Frequency fiber laser is a turn-key system based on single frequency laser basic module of Idealphotonics Laser. It takes special “Optimized ring cavity” designed to eliminate the standing wave Spatial Hole Burning phenomenon which appears easily in short linear cavity. It comes with particular ultra narrow filter and polarization controlling technology to realize PM, Single Longitudinal Mode, ultra-narrow linewidth output. It features ultra-narrow linewidth in the kHz range, extremely low RIN and intensity noise and excellent SMSR more than 50dB.

1.0um band SF fiber laser with 200mW output power and higher 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.

The benchtop single-frequency fiber lasers of Idealphotonics Laser employ the control system based on microprocessor which has stable property, long lifetime and free maintenance. With a clear interface and easy control, the LCD on the front panel can give a real-time display of the operating state of the output power and temperature. The LCD can also offer warning messages. They are ideal tools for scientific researches.

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-option
- PM output, high PER

Application

- Fiber optic sensing
- LiDAR

- Atomic trapping
- Laser spectroscopy
- Wavelength references
- Research & development

Specification

Parameter	Unit	Specification			
		Min	Typ.	Max	
Part NO.		IDP-1064-B-SF			
Center Wavelength ¹	nm	1000-1200nm			
Output power ²	mW	5	-	200	
Output laser type		CW, single frequency & single polarization			
Beam quality	M ²	<1.05			
Linewidth3(FWHM)	kHz	-	1	-	
Side Mode Suppression Ratio(SMSR)	dB	50	55	-	
Phase noise	Rad/rt(Hz)	<-120@500Hz; <-110@10Hz			
RIN peak	MHz	1			
RIN	dBC/Hz	<-120@1MHz; <-140@10MHz			
Output polarization type		Linear polarization			
Polarization Extinction Ratio(PER)	dB	20	-	-	
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		PM980-XP			
Length of the output fiber	m	> 0.5			
Optical connectors		(Other) wavelength is available;			
Dimension	mm	19" 2U			

¹The center Wavelength is selectable within the specified range. Other wavelength is available;



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

1xxx: wavelength in nm, Standard wavelengths:1064nm, 1018nm, 1030nm, 1053nm, 1083nm, 1178nm etc;

B:Benchtop;

PW:output power in mW.Example: 5-5mW,100-100mW