

Wideband Tunable Fiber Laser

Polarization Maintained Fast Tunable Laser

TWFL-100

Key Features

- Wide wavelength tuning range
- High speed wavelength scanning
- Polarization maintaining output
- Stable and robust all-fiber laser
- Absolute wavelength repeatability
- Narrow linewidth 0.02nm



TWFL-100 is a reliable continuous wave (CW) tunable fiber laser with a wide wavelength tuning range from 1525 to 1585 nm. It is a polarization-maintained all-fiber ring laser with a polarization extinction ratio (PER) of >20 dB. A fast wavelength tuning speed as high as 400 nm/sec makes it a perfect optical source for real-time characterization of various fiber-optic components such as filters, EDFAs and dense-WDM devices. The wide wavelength tuning range is also ideal for fast chromatic dispersion measurement based on the modulation phase-shift method.

Applications

- Optical component characterization
- Tunable laser source for various optical measurement applications
- Analysis of discontinuity/thickness of thin film material layer
- Optical source for all fiber sensor application in smart structure
- Rapid wavelength-swept laser source for OCT

Typical Characteristics

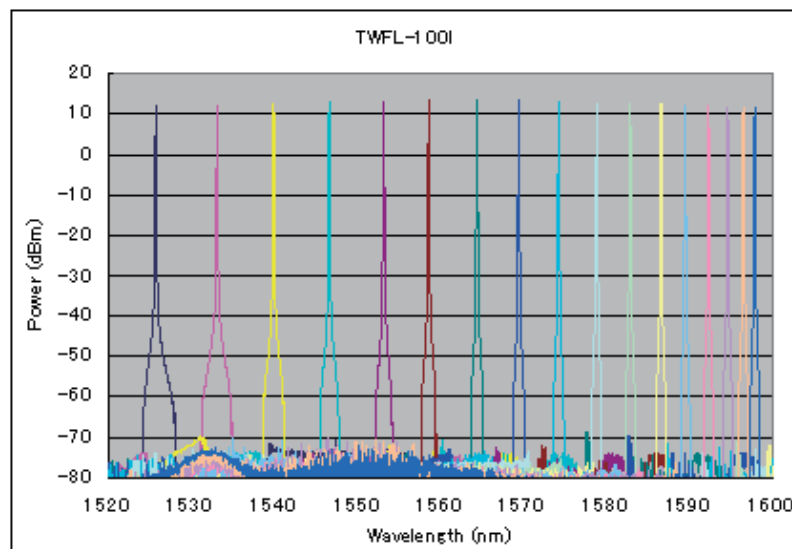


Fig. 1 Tuning spectrum

Specifications

Category	Parameter	Specification			Unit
		Min.	Typ.	Max.	
Optical Output	Average power	3			mW
	Tunable wavelength range ¹	1525		1585	nm
	Wavelength tuning resolution		0.05		nm
	Wavelength repeatability			0.1	nm
	Linewidth		0.02	0.05	nm
	Polarization extinction ratio	20	25		dB
	Wavelength tuning speed		100		nm/s
Connector	Optical output	SC/SPC (PM)			
Electrical	External control voltage ²	0		+10	V
	Power supply	85 to 260 (50-60Hz)			Vac
	Power consumption	10			W
Operating Conditions	Operating Temperature	+5		+45	
	Humidity (non-condensing)			80	%RH
Physical	Dimensions (W x H x D)	485 x 88 x 376			mm
	Weight	10			kg

Note: The specifications are subjected to change without prior notice. Please contact Alnair Labs for more details.

1. Wavelength range when output power is within 3dB of the nominal output power level. 2. External voltage or internal front-panel control voltage for center wavelength control.

Application Examples

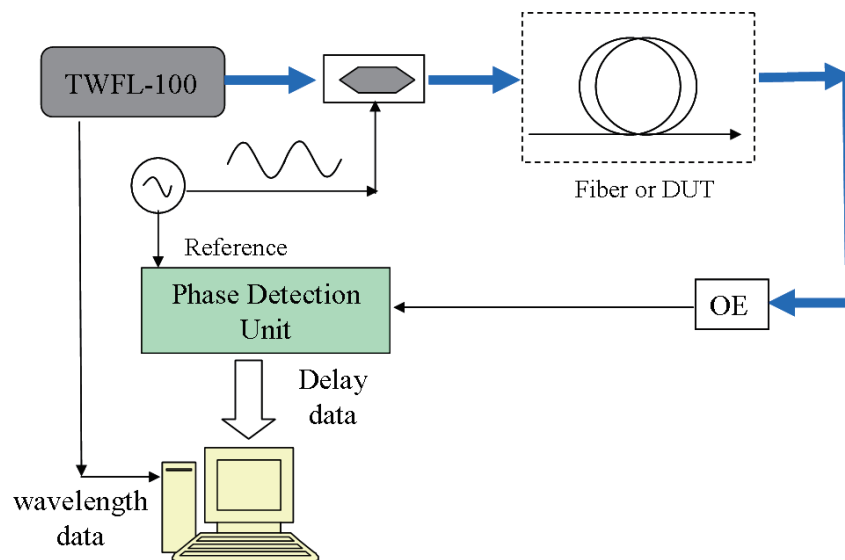


Fig. 2 High-speed dispersion measurement and component characterization using TWFL-100.

Ordering Information

TWFL-100