

OCI High Resolution Optical Link Diagnostic System

Description

OCI is an ultra-high precision optical link diagnostic instrument. By using optical frequency domain reflection (OFDR) technology, a single measurement can achieve a full range of diagnosis from optical devices to the optical links. OCI's event point positioning accuracy can be up to 0.1mm, which means it can easily identify macrobends, connection points and break points in the optical fiber links, and accurately measure parameters such as return loss, insertion loss, and spectrum. Moreover, by adding the optional distributed optical fiber sensing function, OCI can achieve high-resolution measurement of strain and temperature.



Features

- Wavelength range: 1525nm~1625nm or 1265nm~1340nm
- Spatial resolution: 10 μ m@50m, 20 μ m@100m
- Measurement range: 100m
- Excellent stability, self-calibration without user intervention
- Extended function for distributed measurement of strain and temperature
- Software and hardware customization

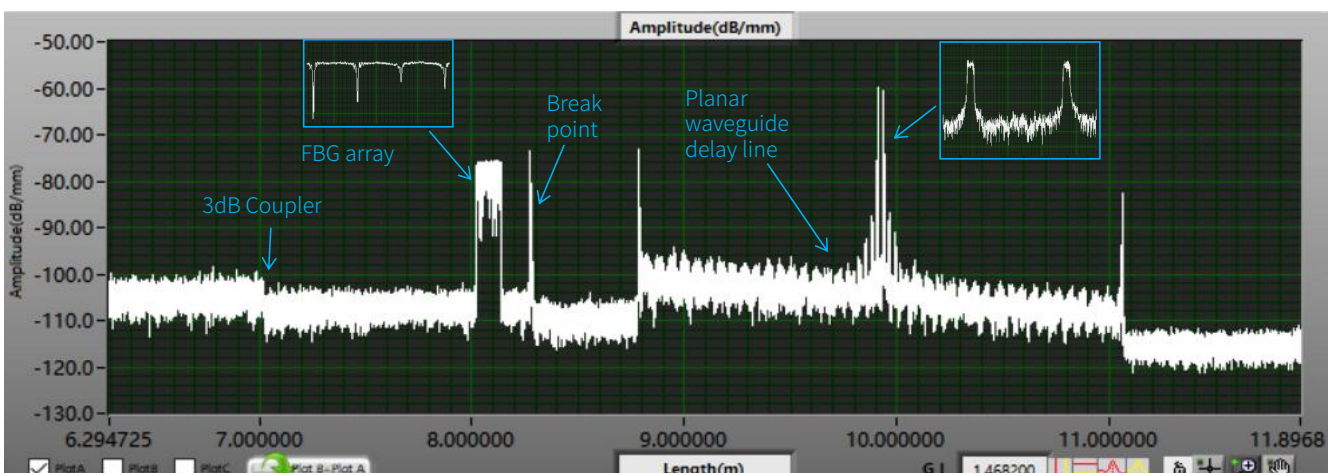
Applications

Optical communication measurement

- Optical device and module measurement
- Fiber length measurement
- Silicon photonics chip measurement
- Spectrum and group delay measurement

Distributed optical fiber sensing

- Structural health monitoring
- Composite material fatigue testing
- Strain and temperature testing on automobile structure
- Strain and temperature field reconstruction for other areas



Parameters

Note:

1. Larger measurement range can be customized.
2. Measurement time is related to the parameter configuration.
3. If other wavelength is needed, please contact us.
4. For options, please contact us.
5. The length result is obtained by setting specific refractive index.
6. 0.1mm accuracy is obtained in high precision mode.
7. Temperature range is related to the material property of optical fiber sensor.

Parameters				
	Measurement Range ¹	50	100	m
	Spatial Resolution	10	20	μm
	Measurement Time ²	< 8	< 12	s
	Sensitivity		-130	dB
	RL Range		-125 ~ 0	dB
	RL Dynamic Range		80	dB
	IL Dynamic Range		18	dB
	RL/IL Resolution		0.05	dB
	RL/IL Accuracy		±0.1	dB
	Dead Zone		None	-
	Spectrum			
	Wavelength Range ³	1525~1625 or 1265~1340		nm
	Wavelength Resolution	0.015		pm
	Wavelength Accuracy	±1.0		pm
	Group Delay Accuracy	1.0		ps
	Others			
	Output Optical Power	<5		mW
	Input Voltage	AC 220/110V; DC 12V		-
	Power	60		W
	Communication Interface	USB		-
	Optical Fiber Connector	FC/APC		-
	Dimension	D 330 * W 350 * H 160		mm
	Weight	7.5		kg
	Storage Temperature	0 ~ 50		°C
	Operating Temperature	10 ~ 40		°C
	Relative Humidity	<90		%RH
	Options⁴			
	Interferometer Delay Measurement⁵			
	Measurement Range	50	100	m
	Accuracy ⁶	0.1		mm
	Distributed Strain And Temperature Measurement			
	Sensing Length	50	100	m
	Spatial Resolution	5		mm
	Strain Accuracy	±1.0		με
	Strain Range	±12000		με
	Temperature Accuracy	±0.1		°C
	Temperature Range ⁷	-200 ~ 1200		°C

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