OCI High-resolution Optical Link Diagnostic Instrument

Description

The OCI is an ultra-high resolution and accuracy optical link diagnostic instrument. The principle of this product is based on optical frequency domain reflection (OFDR) technology. Just a single scan, a lot of parameters can be captured from device to the entire system, such as RL, IL, Group delay, Optical spectrum and so on. The OCI can easily find macro bends, connection points and breakpoints without dead zone. The fiber length can also be measured with high location accuracy of 0.1mm. In addition, The OCI can extend the function of distributed sensing to achieve ultra-high precise measurement of strain and temperature.

Features

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

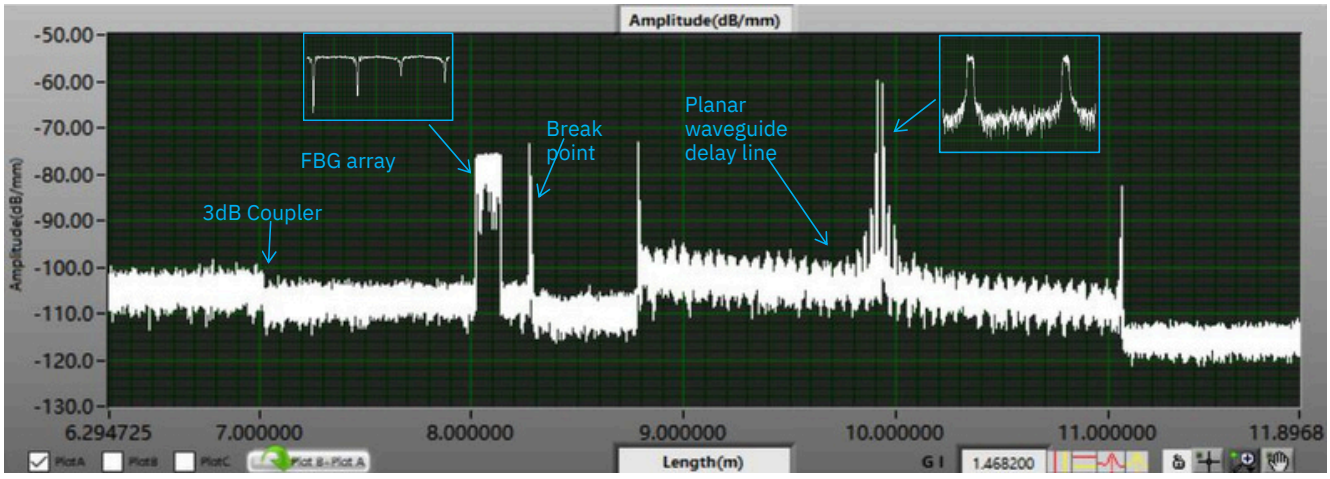
Applications

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 for automobile structure
- Strain and temperature field reconstruction for other areas



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Parameters

Parameters			
Measurement Range1	50	100	m
Spatial Resolution	10	20	μm
Measurement Time2	<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	无		-
Spectrum			
Wavelength Range3	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		-
Size	352 x 330 x 158		mm
Weight	7.5		kg
Storage Temperature	0~50		℃
Operating Temperature	10~40		℃
Relative Humidity	10~90		%RH
Options4			
Interferometer Delay Measurement5			
Measurement Range	50	100	m
Accuracy6	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		℃
Temperature Range7	-200~1200		℃

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.

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