

AE8100 Series Optical Spectrum Analyzer



Introduction

AE8100 series OSA is the first handheld optical spectrum analyzer in the world launched by Deviser in early 2014 with accuracy up to 8GHz and resolution up to 1GHz. It adapts 7inch 800 x 480 matrix TFT touch screen, modular basis and real-time analysis process technique. AE8100 OSA is compatible with different optical communication wavebands, measures the quality of optical signal accurately and efficiently, and offers CWDM/DWDM application test and in-band OSNR measurement etc. The AE8100 series has released 2 models at the moment, AE8100A and AE8100B, which support measurement of C and L waveband correspondingly. The AE8100 series module operates based on FC-1 general platform which also supports portable OTDR, 1G and 10G Ethernet measurement module.

Benefits

1. The smallest handheld OSA in the industry less than 3kg
2. Super accurate wave length resolution, max. FWHM 0.03nm
3. OSNR dynamic range over 35dB
4. 7inch touch screen, professional & fast UI & UE
5. Long operation time of more than 8h
6. 2 models for C & L waveband
7. Fast sweep, sweep time for entire wave length <3s
8. Complete user data port, support LAN, USB, SD and etc.
9. Support modularization, support OTDR and professional Ethernet modules on one platform

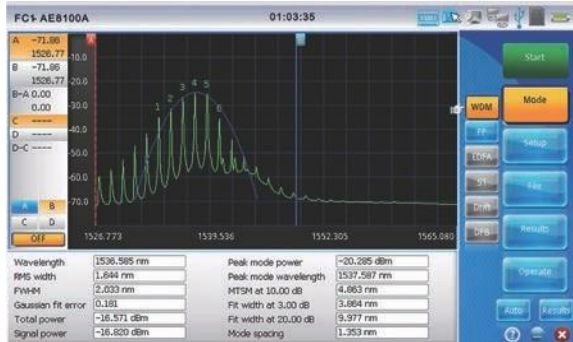
Applications

1. Spectrum channel of C or L wave band
2. Measure the optical spectrum purity and power distribution of laser source
3. Measure the transmission characteristics of optical instruments
4. Diagnose and monitor the key parameters of DWDM signal, and check the system stability
5. All channel characteristics indicated DWDM with 50GHz and 100GHz interval
6. Measure in-band OSN

Important measurement method & report

1.FP measurement

- Measure the optical spectrum curve of FP light source



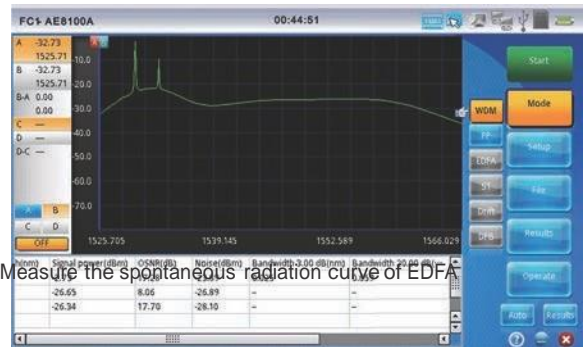
- Measurement result of FP light source



- Curve information of FP light source



2.EDFA measurement



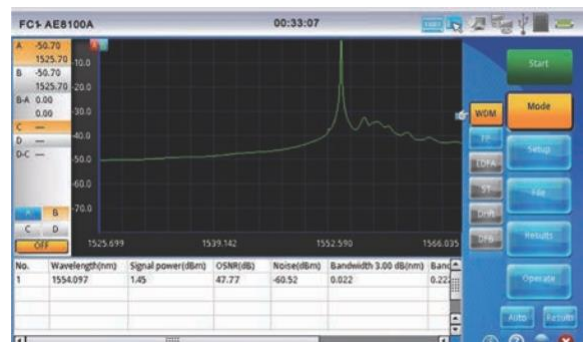
- Measure the spontaneous radiation curve of EDFA

3. Acetylene absorption spectrum measurement

- Measure the absorption spectrum curve of acetylene

4.DFB measurement

- Measure the optical spectrum curve of DFB light source



Specification

1. Key technical parameters

OSA Module Model	AE8100A	AE8100B
Wavelength Range		
Min	1527nm	1570nm
Max	1567nm	1610nm
Key Parameters ^a		
Min. Power Resolution	0.1dBm	0.1dBm
Power Uncertainty	±0.5dB	±0.5dB
Max. Detectable Power	+20dBm	+20dBm
Min. Detectable Power	-45dBm	-45dBm
Power Repeatable Rate	< 0.5dB	< 0.5dB
Frequency Uncertainty	±8GHz	±8GHz
Min. Frequency Resolution	1GHz	1GHz
OSNR Measurement Dynamic	>35dB	>35dB
OSNR Measurement Uncertainty	±0.5dB	±0.5dB

a: 22.5°C ±2.5°C , relative humidity 70%

2. Important Specifications

Item	Technical Specifications	
Basic Parameters ^b		
FC-1 platform	Display	7in (178mm) 800x480 dot matrix TFT touch screen
	Port	USB2.0 x2, USB power supply, DC5V±0.05V@500mA
		RJ45x1, LAN, 10M/100M
		SDx1, max. support 64GB
	Storage	1GB
		8GB SD card
	Battery	7.4V 7500mAh lithium battery group, 55.5Wh support up to 8h working time
	Overall power consumption	<3.5W
Power supply	AC	100-240V 1.5A 50~60Hz
	DC	Max. 12V 5A
	Total Power	Max. 60W
AE8100 Module	Dynamic Range	60dB
	Measurement Time	<3s
Functional Parameters		
Measurement Mode	Manual, Auto	
Online Help	Y	
Restore Factory Settings	Y	
File Format	.osa / .txt / .bmp	
Screenshot	Y	
Touch Screen Soft keyboard	Y	
Browser	Y	
Timing Shutdown/Sleep	Y	
WDM Measurement	Y (support standard 50G & 100G channel list, see attached list 1 & 2)	
FP Measurement	Y	
Auto Measurement	Y	
Real-Time Measurement	Y	
Language	Chinese, English	
Measurement Port		
PC Port	Standard	
APC Port	Optional, Identify when ordering	
Standard Optical Adaptor	FC	
Optional Optical Adaptor	SC, ST, LC	
Mechanical & Environmental Parameters		
Size (L x W x H)	Full Set: 252x184x76(mm)	
Weight	Full Set: 2.3kg Module: 410g	
Operation Temperature Range	-5°C ~+50°C	
Storage Temperature Range	-40°C ~+70°C	
Relative Humidity	0%-95% No Condensation	

b: AE8100 OSA is composed by FC-1 general digital platform and AE8100A/B mo

