Optical Spectrum Analyzer
AE8700D-01

Key Benefits

- Single mode and multi-mode wavelength range from 800nm to 1650nm.
- Wide range of power measurement from +23dBm to -85dBm and wide dynamic range up to 78dB typical
- Outstanding wavelength & power measurement accuracy with wavelength resolution up to 0.01nm and built-in calibration source(Option)
- WDM, Laser, and EDFA test modes
- 10.1" 1280x800 TFT touchscreen LCD
- Multiple data storage and interface – LAN (RJ-45), USB, RS232, GP-IB(Option) … etc.
- Customizable auto-test scenario

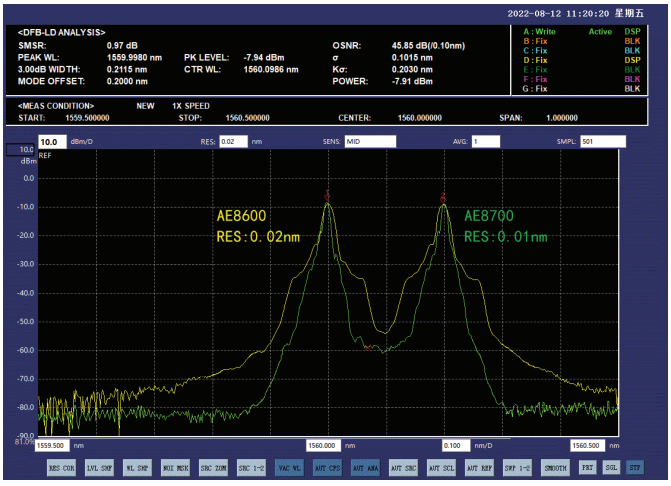
Overview

Brought to you by Deviser Instruments Inc, the AE8700D-01 is a high-precision diffraction-grating, high-resolution optical spectrometer with wavelength range of 800nm to 1650nm. The 10.1" LCD touchscreen and concise graphical user interface of AE8700D-01 offer the easiest way to handle optical spectrum analysis.

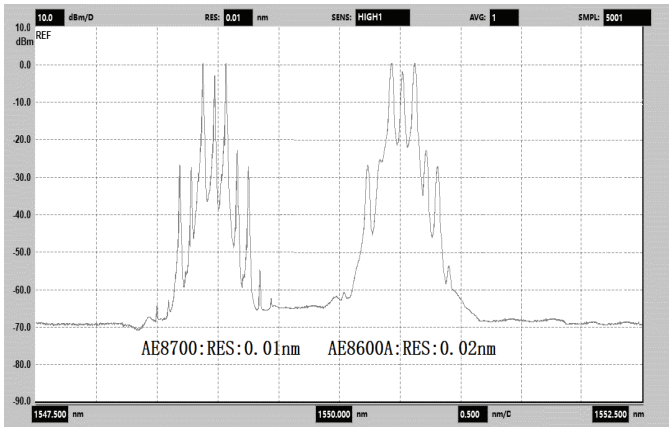
AE8700D-01 provides a wide selection of test methodology, including laser spectrum scans (DPB, FP), WDM system testing, EDFA system testing, transmittance and drift testing, which are essential for in-field and factory applications. The AE8700D-01 offers exceptional stability and reliability, high-speed spectral sweeping, and multiple ways to export and analyze measurement data. It's the ideal instrument for fast and precise optical spectral testing to satisfy long-term investment with the best cost performance value.

key features

Higher resolution facilitates spectral detail measurement



AE8700 supports various modulation formats for spectral measur ement



Spectral Comparison Test of 10G Modulation Signal

Specifications

Optical Spectrum Measurement Specifications	
Applicable fiber	SM(9.5/125μm), MMF(50/125μm, 62.5/125μm), Large core: up to 400 μm
Wavelength range[1]	800 to 1650nm
Wavelength resolution bandwidth	0.01 to 1nm
Wavelength resolution setting[1,2]	0.01nm, 0.02nm, 0.05nm, 0.1nm, 0.2nm, 0.5nm, 1nm
Wavelength accuracy[1,2,5]	1520 to 1620nm ±0.01nm; 1450 to 1520nm ±0.02nm Entire wavelength ±0.05nm
Wavelength repeatability[1,2]	±0.004nm (1 min.)
Wavelength linearity[1,2,5]	±0.01nm (1520 to 1580nm) ; ±0.015nm (1450 to 1520nm,1580 to 1620nm)
Min. sampling resolution[1]	0.001nm
Optical Power Measurement Specifications	
Level sensitivity[2,3,4,7]	-85dBm(1300-1620nm, resolution ≥0.05nm) -70dBm(1000-1300nm, resolution ≥0.05nm) -55dBm(600 - 1000nm, resolution ≥0.05nm)
Maximum input power[2,3]	+23dBm
Level accuracy[2,3,4,6]	±0.5dB(1310/1550nm, Input level: -20dBm)
Level linearity[2,3]	±0.05dB(Input level: -50 to +10dBm)
Wavelength sampling points	101 to 50001, AUTO
Optical return loss[11]	>35dB (with angled-PC connector)
Polarization dependence[2,3,6]	±0.05dB(@1550nm)
Dynamic range[1,2,8]	Peak ±0.1nm 55dB(resolution: 0.01nm) Peak ±0.4nm 75dB(resolution: 0.01nm) Peak ±1.0nm 78dB(resolution: 0.01nm)
Level sensitivity setting	NORM_HOLD, NORM_AUTO, NORMAL, MID, HIGH1, HIGH2, HIGH3
Wavelength reference source	standard
Sweep time[1,7,9]	0.3s (Sensitivity:MID, Span:30nm, Resolution:0.1nm, Sampling:501,2x)
Warm-up time	Minimum 1 hour
General Specificatons	
Display	10.1 inch TFT LCD touchscreen (Resolution: 1280×800)
Interface	USB 2.0 × 5, USB 3.0, VGA
	RJ45 LAN port (10M/100M/1000M), RS232-DB9
GP-IB	Option
Data storage	Internal storage: 128GB hard–drive File types: CSV, Binary, BMP
Operating temperature	+5 to +35°C
Storage temperature	–10 to +50°C
Power supply	AC 100-240V 1.7A 50~60Hz
Dimensions	427 x 221 x 448 (mm)
Weight	20kg
Performance quadrate temperature	+18 ~ +28°C

1.Horizontal axis scale: In wavelength display mode.
2.9.5/125μm single mode fiber (PC polishing), after warm-up of 1 hours, after alignment with a built-in wavelength reference light source or single longitudinal mode laser (wavelength: 1520 to 1560nm, wavelength stability: ±0.01nm or less).
3.Vertical scale: absolute value level display mode, Resolution setting: 0.05nm or more, Resolution correction: OFF.
4.When using 9.5/125μm single mode fiber.
5.After wavelength calibration using a built-in wavelength reference light source or single longitudinal mode laser.
6.With the resolution setting of 0.05nm, at ambient temperature of 23 ± 3°C.
7.High dynamic mode: OFF, Pulse light measurement mode: OFF, Resolution correction: OFF.
8.1523nm, High dynamic mode:SWITCH, Resolution correction: OFF.
9.Span 100nm or less, Wavelength sampling points: 1001, Averaging times: 1.
10.When applying a He-Ne laser (1523nm), Resolution: 0.1nm, 1520nm to 1620nm (excluding Peak ± 2nm).
11.When using the signal mode fiber with our standard Angled PC connector, it is 15dB(Typ.) when using the PC connector.