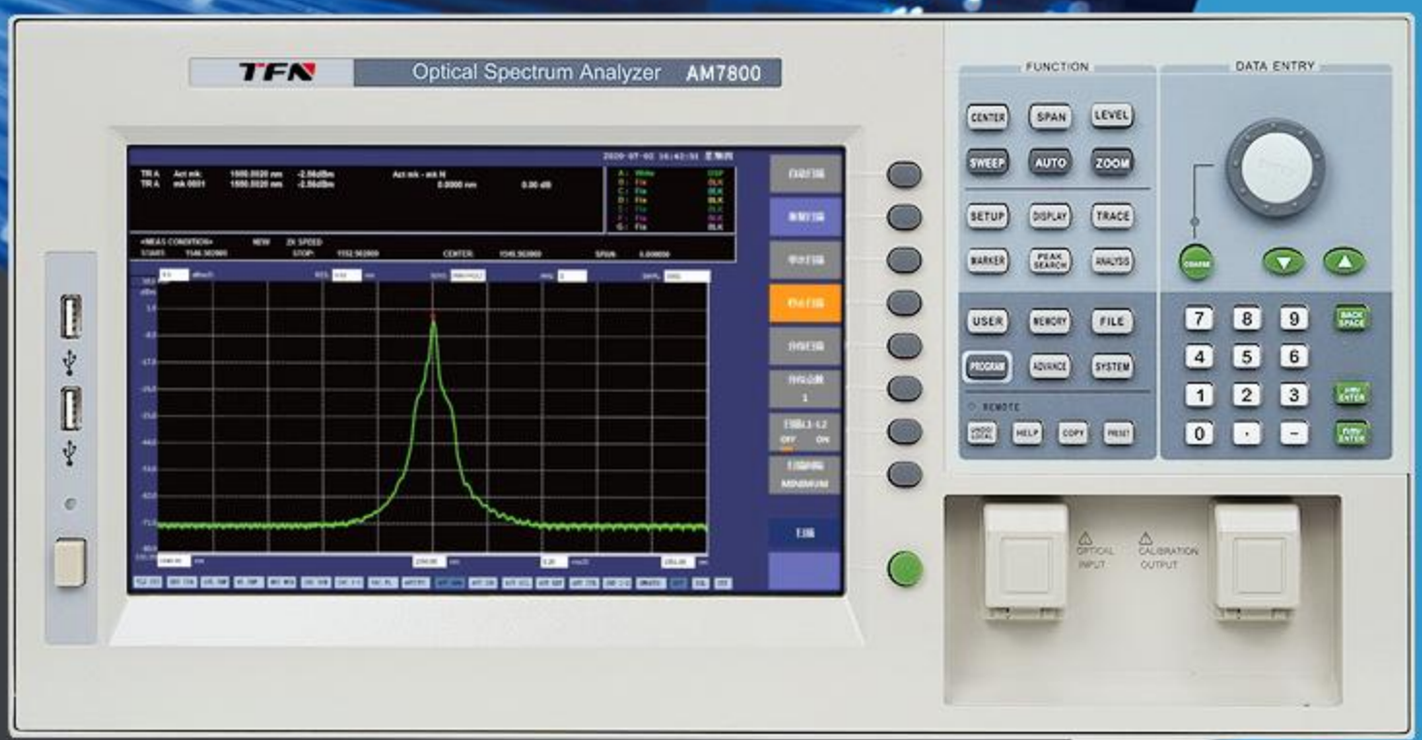


AM7800

Optical Spectrum Analyzer

Spectral range：600nm~1700nm

AM7800 | Optical Spectrum Analyzer

Performance characteristics

- Spectral range 600nm-1700nm, suitable for single-mode and multi-mode fiber input
- 7 wavelength resolution settings 20pm-2nm, allowing users to choose the best value according to test needs
- Sensitivity setting as low as -90dbm
- 75dB ultra-large dynamic range, can effectively separate similar spectral signals and perform accurate measurements
- ±0.015nm high wavelength accuracy, built-in wavelength calibration function
- High stray light suppression rate, monochromator design can provide excellent stray light suppression ability
- WDM, light source, EDFA and other rich functional options to meet various applications from field to factory
- 10.1-inch ultra-large touch screen operation, better customer experience
- Complete user data interface, support Ethernet, USB, GP-IB, etc.
- Build automated detection and test system according to customer needs

Function introduction

Project	Function
Measurement	
Measurement mode	CW light, pulse light, air/vacuum wavelength
Scan mode	Repeat, word, AUTO (automatic configuration), scan between line markers
Condition setting	Center wavelength, span, number of sampling points, wavelength resolution, sensitivity, large dynamic measurement mode, average times (999-1 times), double speed mode, smoothing, APC power compensation

Display	
Vertical scale	Power scale (10-0.1dB/div., linear), power auxiliary scale (10-0.1dB/div., linear), reference power, partition (10 ,8 or 12), power spectrum width (dB/nm), dB/km, %, noise shielding
Horizontal scale	Wavelength (nm), frequency (THz), waveform zoom
Display mode & items	Normal display, split screen display, data table, label, template, measurement conditions
Curve	
Curve function	7 independent curves, maximum/minimum value hold, inter-curve operation, standardized display, curve fitting, peak curve fitting, marker curve fitting, rolling average (100~2 times)
Others	Curve copy/clear Except function, Write/Fix setting, Display/blank setting

Mark & Search

Mark	Triangle Mark (Max.1024), Vertical/Horizontal Mark, Advanced Mark
Search	Peak, Valley, Next Peak, Next Valley, Multiple Peaks, Multiple Valleys, Auto Search (On/OFF), Search between horizontal markers, Search zoom area

Data Analysis

Analysis function	Spectral width (threshold, envelope, RMS, peak-RMS, notch), WDM (OSNR) analysis, EDFA-NF analysis, filter peak/trough analysis, WDM filter peak/trough analysis, DFB-LD/FP-LD/LED analysis, SMSR analysis, power analysis, PMD analysis
Others	Automatic analysis (ON/OFF), analysis between horizontal line markers, analysis in zoom area

Other functions

Wavelength calibration	Automatic wavelength calibration using built-in wavelength reference source

Typical function application interface

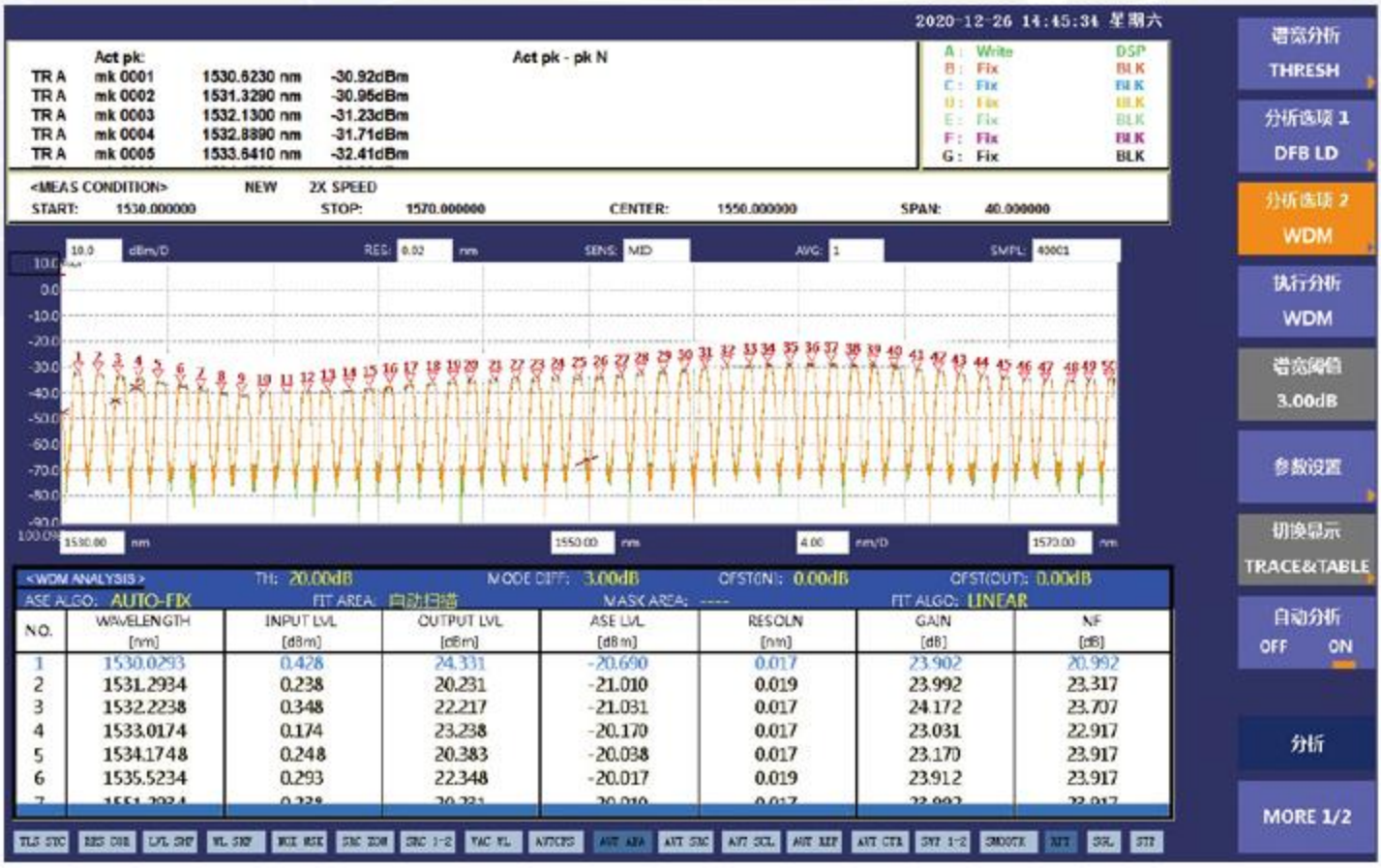
EDFA performance measurement

- PSSE: spontaneous emission power of light source
- PASE: spontaneous emission power amplified by EDFA
- Gain
- Noise figure

DFB light source measurement

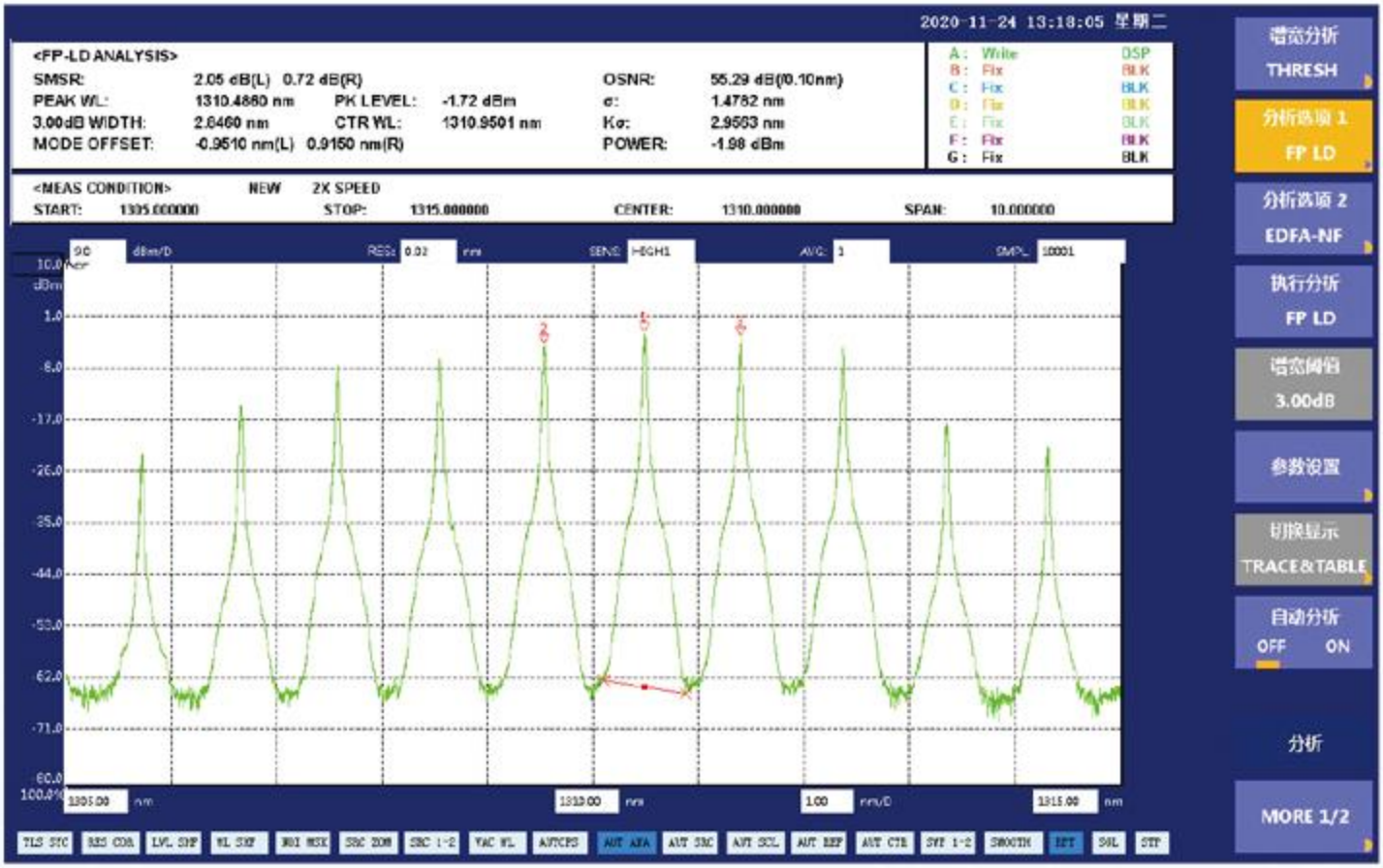
- Center wavelength
- Center wavelength power and total power
- Bandwidth
- SMSR: side mode suppression ratio
- OSNR: signal-to-noise ratio
- Center wavelength drift

WDM channel measurement



- Channel wavelength and power
- Channel offset
- OSNR: in-band and out-of-band signal-to-noise ratio
- Bandwidth

FP light source measurement



- Center wavelength
- RMS width and FWHM
- Power
- Bandwidth
- Mode spacing

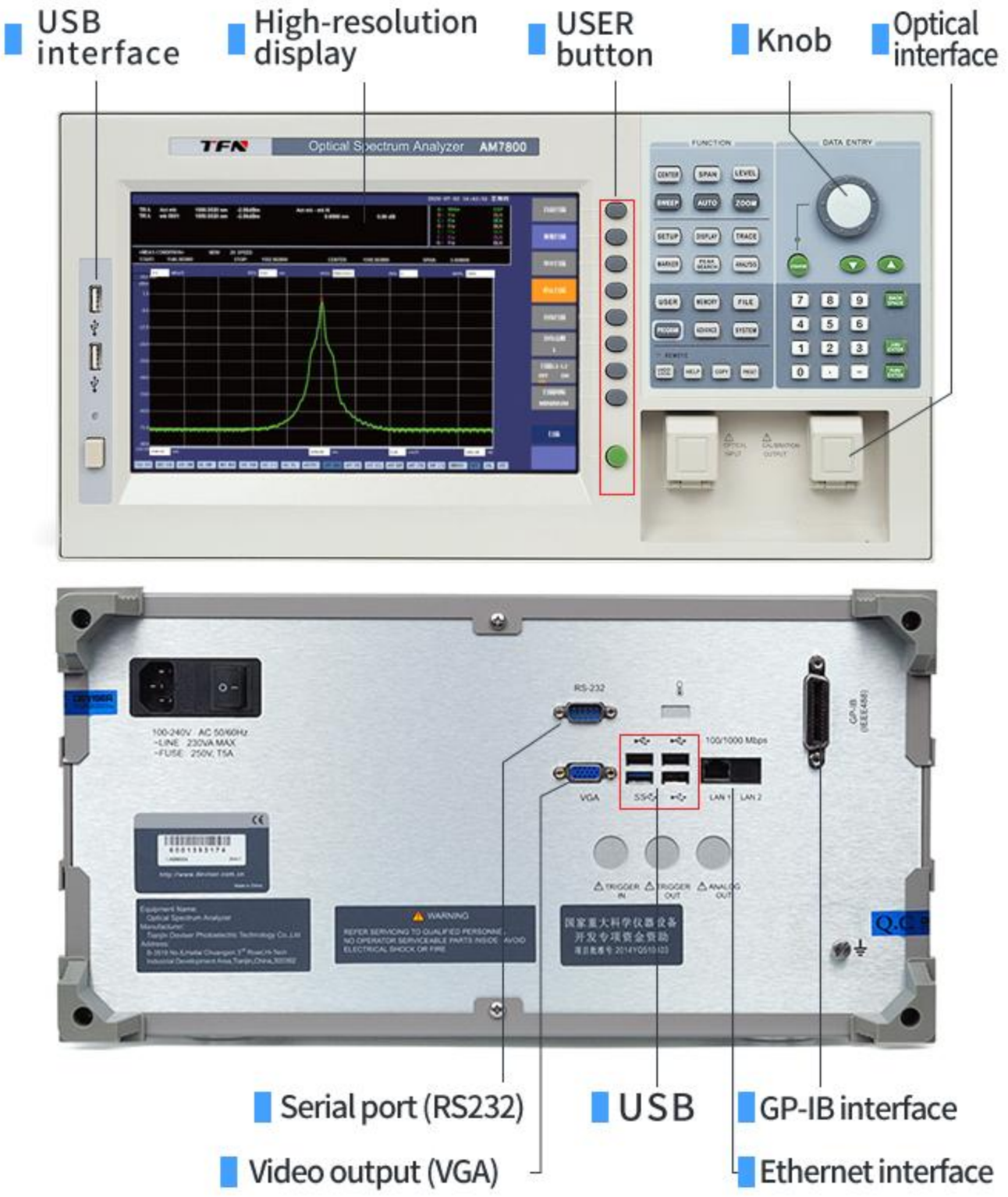
Gas detection and concentration measurement

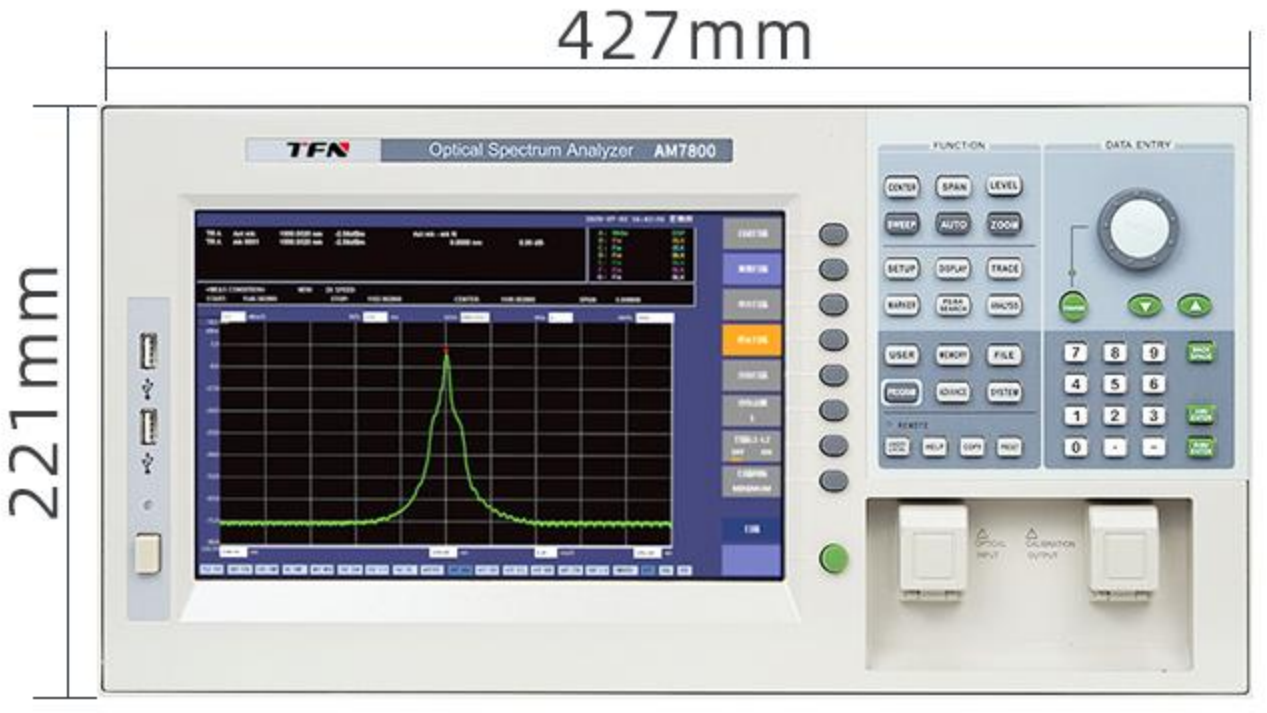
When used with broadband light sources such as supercontinuum (SC) or superluminescent diode (SLD), the AE8600A can display the optical absorption spectrum of the measured gas mixture.

Notch bandwidth measurement

The AE8600A can measure the passband bandwidth or stopband bandwidth from the measured waveform of the V-characteristic or U-characteristic filter through notch bandwidth measurement.

Appearance buttons and interfaces

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TFN
Optical Spectrum Analyzer AM7800
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CENTER
SPAN
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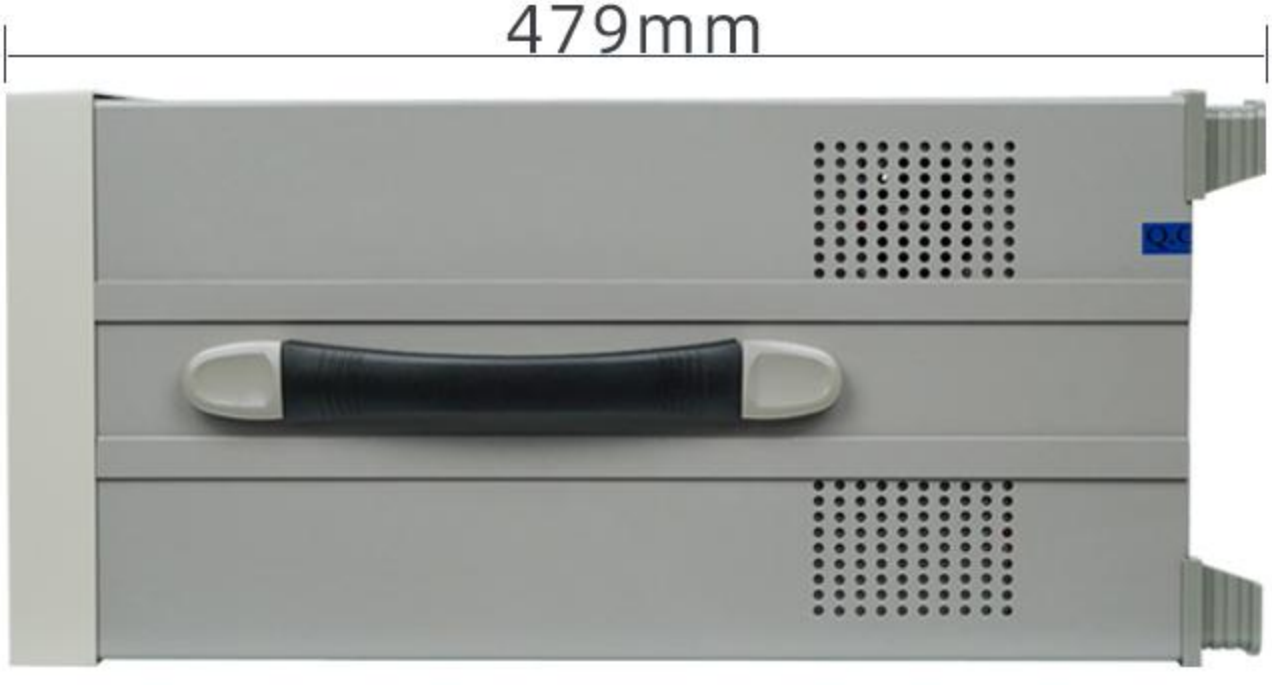
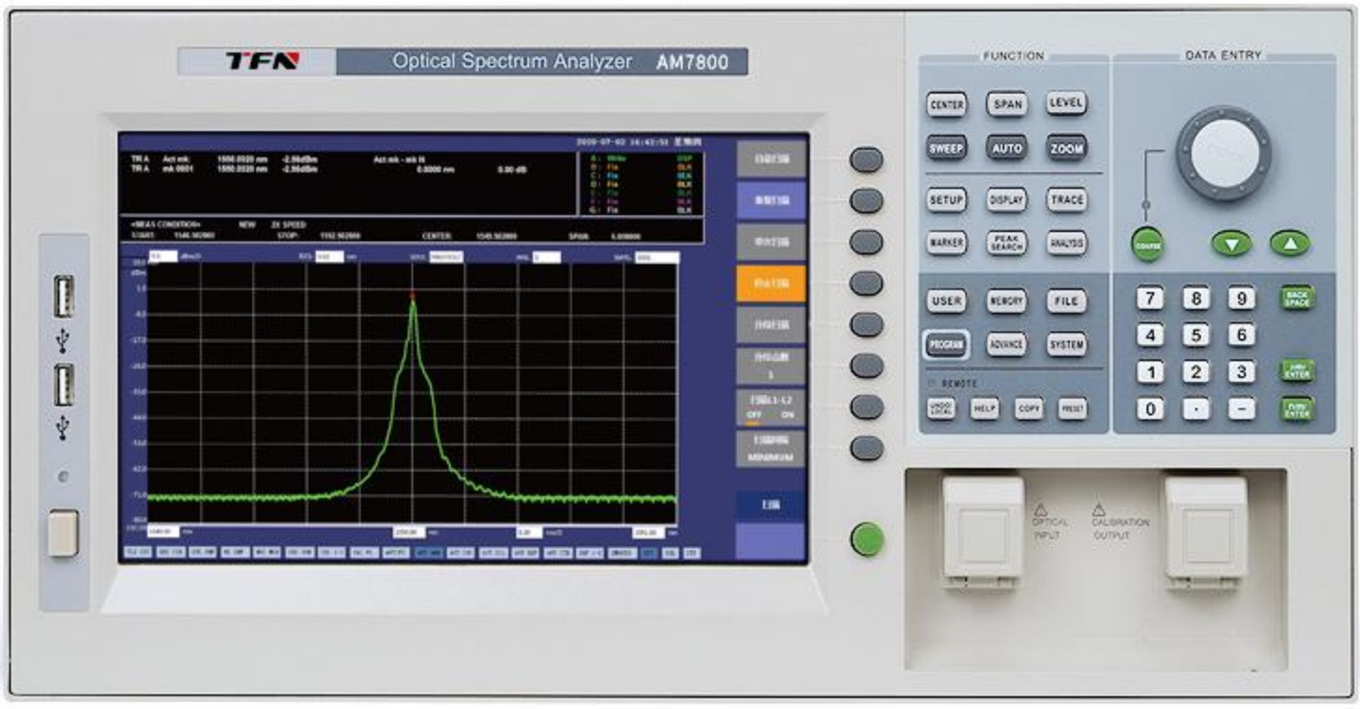

479mm

Technical parameters

Spectrum measurement	
Input fiber	SM(9.5 / 125μm)、MMF(50 / 125μm、62.5 / 125μm)
Wavelength range	600 ~ 1700nm
Resolution bandwidth	0.02 ~ 2nm
Resolution setting	0.02nm、0.05nm、0.1nm、0.2nm、0.5nm、1nm、2nm
Wavelength accuracy	1520 to 1620 nm ±0.015 nm 1450 to 1520 nm ±0.025 nm Full range ±0.08 nm
Wavelength repeatability	±0.01 nm (1 minute)
Wavelength linearity	±0.015 nm (1520 to 1580 nm); ±0.025 nm (1450 to 1520 nm, 1580 to 1620 nm)

Minimum sampling resolution	0.001nm
Power measurement	
Power sensitivity	-90dBm（1300-1620nm，Resolution≦0.05nm） -85dBm（1000-1300nm，Resolution≦0.05nm） -55dBm（600-1000nm，Resolution≦0.05nm）
Maximum input power	+23dBm
Power accuracy	±0.3dB（1310 / 1550nm，Input power：-20dBm）
Power linearity	±0.08dB（Input power：-50 ~ +10dBm）
Maximum number of sampling points	50001
Optical return loss	>35dB （When using APC interface）
Polarization dependence	±0.08dB(1550nm)
Optical dynamic range	Peak wavelength ± 0.1nm 50db (Resolution: 0.02m) Peak wavelength ± 0.4nm 70db (Resolution: 0.05m) Peak wavelength ± 1.0nm 75db (Resolution: 0.05m)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OPTICAL INPUT
CALIBRATION OUTPUT


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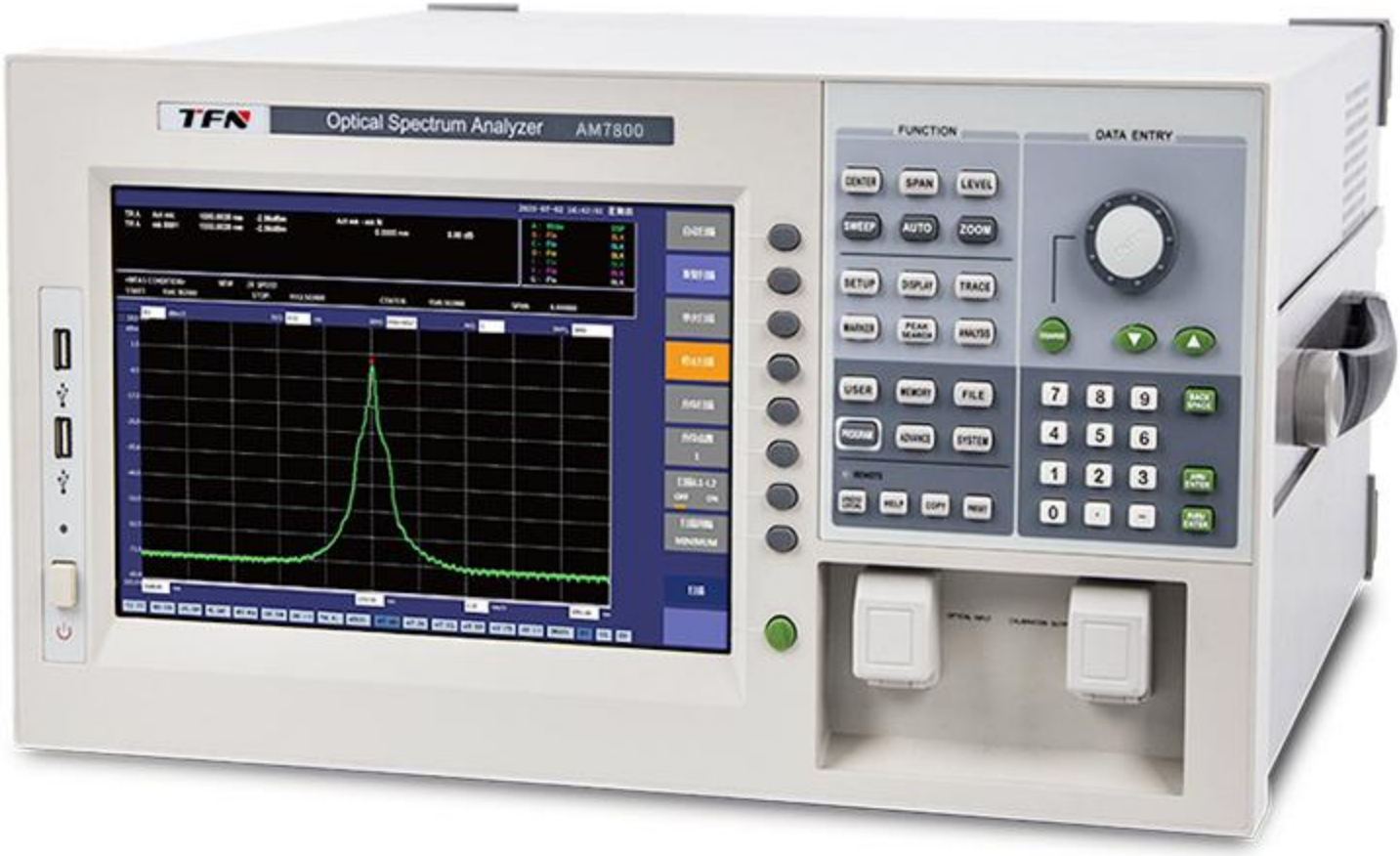
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