

# AE8805D-01 Optical Spectrum Analyzer



Brought to you by Deviser photoelectric, the AE8805D-01 provides high-speed and accurate analysis of the short wavelengths from 350 to 1200 nm. This high-performance model capable of conducting high-speed and precise analysis across the ultraviolet, visible light, and near-infrared spectrums. It effectively caters to testing requirements in various fields including lasers, passive devices, and material composition analysis.

## Key Features

- Wavelength Range: 350 to 1200 nm
- Wavelength resolution settings: 0.02nm to 2 nm
- Wide measurable level range: - 80 dBm to +20 dBm
- Wavelength accuracy:  $\pm 0.05$  nm
- Close-in dynamic range: 60 dB
- 10.1 inch large touchscreen LCD makes device operation even simpler and more intuitive.

## Applications

- Ultraviolet, visible light, and near-infrared spectrums measurement
- Optical passive devices testing
- Environmental sensing
- Characterization of Lasers used in Medical/Bio applications
- Material composition analysis

## Specifications

Model	AE8805D-01	
<b>Optical Spectrum Measurement Specifications</b>		
Applicable fiber	SM (9.5/125 $\mu$ m), MMF (50/125 $\mu$ m, 62.5/125 $\mu$ m)	
Wavelength range <sup>1</sup>	350nm to 1200nm	
Sweeping width <sup>1</sup>	0.5nm to 850nm, 0nm	
Wavelength accuracy <sup>1</sup>	$\pm 0.05$ nm (633 nm) $\pm 0.2$ nm (400 to 1100 nm) (After wavelength calibration with 633 nm He-Ne laser.)	
Wavelength repeatability	$\pm 0.015$ nm (1 min.)	
Wavelength resolution setting <sup>1,2</sup>	0.02nm, 0.05nm, 0.1nm, 0.5nm, 1nm, 2nm	
Min. sampling resolution <sup>1</sup>	0.001nm	
Wavelength sampling points	101 to 50001, AUTO	
<b>Optical Power Measurement Specifications</b>		
Level sensitivity setting	NORM_HOLD, NORM_AUTO, NORMAL, MID, HIGH1, HIGH2, HIGH3	
Level sensitivity <sup>3</sup>	-80dBm (500-1000nm) -60dBm(400-500nm, 1000-1100nm) (Resolution setting: $\geq 0.2$ nm, Sensitivity: HIGH1-3)	
Maximum input power <sup>3</sup>	+20 dBm (550 to 1100 nm) +10 dBm (400 to 550 nm) (Total input power)	
Level accuracy <sup>3</sup>	$\pm 1.0$ dB (850 nm, Input level: -20 dBm, Resolution setting: $\geq 0.2$ nm, Sensitivity: MID, HIGH1-3)	
Level linearity <sup>3</sup>	$\pm 0.2$ dB (Input level: -40 to 0 dBm, Sensitivity: HIGH1-3)	
Dynamic range <sup>1,5</sup>	60 dB (Peak $\pm 0.5$ nm, Resolution: 0.02 nm, 633 nm)	
<b>Technical Specifications</b>		
Fiber optical connector	FC or SC type	
Sweep time <sup>1,4</sup>	0.3s ( Level sensitivity setting :MID, Span: 30nm, Resolution:0.1nm, Number of sampling :501,2x)	
Warm-up time	Minimum 30min.	
Display	10.1 inch TFT LCD touchscreen (Resolution: 1280 $\times$ 800)	
Interface	USB2.0 $\times 5$ , USB 3.0, VGA, GP-IB (Option) RJ45 LAN port (10M/100M/1000M), RS232-DB9	
Environment	Performance guarantee temperature: +20 to +26 $^{\circ}$ C Operating temperature: +5 to +35 $^{\circ}$ C Storage temperature: - 10 to +50 $^{\circ}$ C, Humidity: 20 to 80%RH (no condensation)	
Power supply	AC	100-240V 1.7A 50~60Hz

Performance and functions can be limited by type of used fiber. The specifications are only guaranteed when a single mode fiber in which light travels in single mode at measured wavelength is used. In case that measured wavelength is less than the cut-off wavelength of the used fiber, or a multimode fiber is used, a measured spectrum may be inaccurate due to a speckle noise. Please be cautious especially when measuring high coherency sources like gas laser and Laser diode.

1.Horizontal scale: Wavelength display mode.

2.Actual wavelength resolution values according to a measured wavelength. Actual resolution at 10 nm resolution setting is about 8 nm at most.

3. Vertical scale: Absolute power display mode.

4.High dynamic mode: OFF, number of sampling: 1001, average number: 1, span:  $\leq 100$  nm excluding 450 to 470 nm and 690 to 700 nm.

5.High dynamic mode: SWITCH, fiber core size: SMALL.