

AE-SP2000 Series UV-Visible Spectrophotometer

ISO/CE

Product Features:

- ◆ High Level of Intelligence: Controlled by an ARM chip for fast data processing, equipped with a 128x64 dot array graphic LCD display, featuring rich instructions for ease of use. It supports USB data export, one - click system upgrades, customizable wavelength calibration values, and automatic wavelength calibration, eliminating the need for manual adjustments. The lamp usage time is automatically accumulated for easy monitoring. The lamp source switch menu can be closed when the instrument is not in use, effectively extending the instrument's lifespan. It supports automatic language switching between Chinese and English in file management.
- ◆ Comprehensive Menu Functions: It includes built - in programs for photometry, quantitative measurement (standard curve), spectrum scanning, time scanning, DNA/protein measurement, instrument verification measurement, multi - wavelength measurement, and more.
- ◆ Convenient Data Processing: It can store up to 1000 sets of experimental data and can be equipped with built - in or external miniature printers for output. Additionally, it can be connected to a computer with dedicated analysis software for more data processing and analysis capabilities.
- ◆ Multiple Optional Accessories: Available accessories include an 8 - position automatic sample rack, single - slot microsample rack (minimum measurable 50 samples), 5 - 10 cm sample racks (suitable for water quality testing), and single - slot or three - slot water bath cuvette racks (suitable for temperature - controlled sample requirements), expanding its application in various fields. Optional PC control software is also available for extended functionality.



Product Functions:

- ◆ Photometry Measurement: It allows measurement of sample absorbance or transmittance in the range of 190 - 1100nm, using a single - point test wavelength and testing method of your choice. It can also determine sample concentration by inputting standard sample concentrations or concentration factors.
- ◆ Quantitative Measurement: It can measure the concentration of unknown sample solutions using a curve with known parameters or by automatically establishing a standard curve. It offers first - order, first - order zero - crossing, second - order, and third - order curve fitting, as well as single - wavelength correction, dual - wavelength absorption correction, and the option of a three - point method. Standard curves can be stored and retrieved.
- ◆ Spectrum Scanning: Set a wavelength range (up to 100 test points), scan interval, and measure absorbance, transmittance, reflectance, and energy at intervals for solid or liquid samples. It also allows peak and valley detection, saving, and printing for previously measured spectra.
- ◆ Time Scanning: Also known as kinetic measurement, it scans samples at intervals in terms of absorbance or transmittance over a specified time range based on set wavelengths. It can also convert absorbance to concentration or reaction rate calculation by inputting concentration factors. Multi - Wavelength Measurement: Up to 10 wavelength points can be set for measuring absorbance or transmittance of sample solutions.
- ◆ DNA/Protein Measurement: Mainly measures absorbance at specific points such as 260nm/280nm/230nm/320nm to determine DNA and protein concentrations and ratios based on calculation formulas.
- ◆ GLP Instrument Verification Measurement: It can verify wavelength accuracy, photometric accuracy, and stray light, providing verification results that can be stored, exported, and printed.
- ◆ Additional Functions: Accumulated operating time for deuterium and tungsten lamps, independent on/off control for deuterium and tungsten lamps, switching between UV and visible light wavelength points, language selection (Chinese and English), and automatic wavelength calibration.

Specification:

Mode	AE-SP2000 (VIS)	AE-SP2000 (UV)
Optical System	Single beam; with 1200line/mm grating	
Wavelength range (nm)	320 - 1100	190 - 1100
Spectral Bandwidth (nm)	2	
Wavelength Accuracy (nm)	±1	
Wavelength Repeatability (nm)	≤0.5	
Transmittance Accuracy (%T)	≤0.5	
Transmittance Repeatability (%T)	≤0.2	
Stray Light (%T)	≤0.1 @360nm	≤0.1@360nm@220nm
Spectral Range	0 - 200%T, -0.301 - 3A, 0 - 9999C(0 - 9999F)	
Light Source	Tungsten lamp & Deuterium lamp	
Monitor	Graphic LCD (128×64)	
Language	Chinese, English	
Data Output	U Disk, Bluetooth, Upload to PC by USB port	
Data Format	CSV	
Power Supply	AC90 - 250V/50 - 60Hz	
Size (L×W×H) mm	450×390×210	
Weight (kg)	11	12