

UV-VIS spectrophotometer

I、Features

- 1.High-resolution C-T structure monochromator with excellent stability, reproducibility, and accuracy;
- 2.Utilizes a low-stray-light 1200 lines/mm holographic grating and optimized optical path design to ensure higher measurement accuracy;
- 3.10-inch high-resolution color LCD touch screen for clear and intuitive data display and easy operation;
- 4.Brand-new wavelength drive mechanism significantly improves wavelength accuracy and repeatability, effectively reducing operating noise;
- 5.Independently developed automatic wavelength calibration technology with automatic wavelength calibration and preheating countdown to ensure wavelength accuracy and repeatability;
- 6.Massive data storage space, capable of storing up to 40,000 historical curves;
- 7.Supports A4 test report export via USB drive, one-click data backup, and individual data recovery, with a maximum backup capacity of 80,000 curves;
8. Key components such as deuterium lamp, tungsten lamp, photocell, and precision lead screw are all selected from well-known imported brands to ensure reliable instrument quality;
- 9.Tungsten and deuterium lamps require no adjustment during installation; independently designed replacement windows for deuterium and tungsten lamps, and flange-type positioning structure for easy replacement;
- 10.The instrument can be remotely upgraded via OTA software updates through WIFI connection, making function expansion more convenient;
- 11.Rich standalone functions, including time measurement (kinetic measurement), photometric measurement, quantitative measurement,

spectral scanning, and multi-wavelength testing, to meet various measurement requirements, with direct display on the screen;

12. Open and spacious sample compartment, adaptable to cuvette holders from 10mm to 100mm in length to meet different applications.



II、Product Features

1. Photometric Measurement: Select your desired single-point test wavelength and measurement method to determine the absorbance or transmittance of the sample.
2. Quantitative Measurement: Measure unknown sample concentrations using curves with known parameter factors or by automatically generating standard solution curves; supports first-order, second-order, and third-order curve fitting methods; supports multiple measurement methods, including single-wavelength method, dual-wavelength method, dual-wavelength coefficient method, and triple-wavelength method; standard curves can be stored and recalled.
3. Spectral Scanning: Set a wavelength range and scanning interval, then measure the absorbance, transmittance, and energy of solid or liquid samples at intervals. The measured spectra can also be overlaid, scaled, peak/valley detected, saved, and printed.
4. Time Measurement: Time measurement, also known as kinetic measurement, scans the sample over a time range at a set wavelength

point to measure absorbance or transmittance. Multiple spectrum processing methods are available for the measured spectra, including overlaying, scaling, and peak/valley detection.

5. Multi-wavelength Measurement: Allows for measurement of sample solutions at multiple wavelength points. Based on the set wavelength points, the absorbance or transmittance of the sample solution at multiple wavelengths is measured.

6. Auxiliary Functions: Deuterium lamp and tungsten lamp cumulative operating time, independent switching on and off of deuterium and tungsten lamps, selection of UV and visible light switching wavelength points, operating language selection, dark current correction, automatic wavelength calibration, etc.

III、 Technical parameters

Optical System	Single beam; C-T type optical path; 1200 lines/mm holographic grating;
Wavelength Range	190nm~1100nm
Spectral Bandwidth	2.0nm
Wavelength Accuracy	±0.1nm (@656.1nm); ±0.3nm (full wavelength range);
Wavelength Repeatability	≤0.1nm
Scanning Speed	Moving speed: ≤ 9000nm/min; Scanning speed: ≤ 600nm/min;
Stray Light	≤0.1%T
Wavelength Resolution	0.1nm
Photometric Range	- 4.0~4.0A
Transmittance Accuracy	±0.3%T (0~100%T)
Transmittance	≤0.1%T

Repeatability	
Noise	≤0.2%T (100%); ≤0.05%T (0%);
Drift	0.2%T/0.5h
Baseline Flatness	≤±0.002Abs (200nm~1050nm)
Measurement Modes	Transmittance, Absorbance, Energy, Concentration
Light Source	Deuterium lamp + Tungsten lamp
Display	10-inch high-definition touch screen (resolution 1024 × 600)
Software Upgrade	Supports one-click remote upgrade after connecting to WIFI
Data Output	USB flash drive
Data Output Format	PDF, A4 report
Sample Holder	10mm×10mm cuvette (standard)
Main Unit Functions	Time + Quantitative + Qualitative + Photometric + Multi-wavelength
Power Supply Range	220VAC ± 10% @ 50Hz
Dimensions (L×W×H)	544mm×550mm×233mm
Weight	24.7kg