

SPECTROSCOPY / DATA SHEET

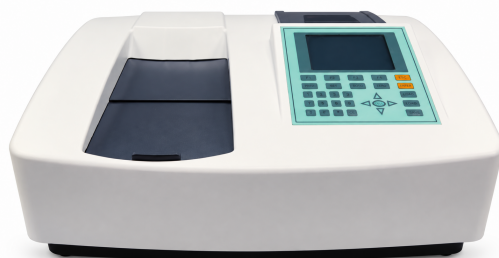
SP 101Z

Double-Beam UV-Vis Spectrophotometer

Scanning UV-Vis platform for photometric, quantitative, wavelength-scan and kinetics measurements.

Overview

- SP 101Z is a large-screen scanning double-beam UV-Vis spectrophotometer for routine analysis and scientific research.
- The double-beam optical path helps suppress system drift and compensate for ratio changes during long-time testing.
- The wide sample compartment accepts 5–100 mm cuvettes and supports accessories for different measurement needs.



Optical system Double beam	Wavelength 190–1100 nm	Bandwidth 2.0 nm	Photometric range 0–200%T / –0.3–3A
Display 6 in, 320 × 240	Interface USB	Sample compartment 5–100 mm cuvettes	Size / weight 545 × 468 × 245 mm / 20 kg

Key Advantages

- Double-beam optics reduce system drift and compensate for ratio changes during long-time tests.
- Wide sample compartment accepts 5–100 mm cuvettes and supports accessories.
- High-quality optical and electronic components support high accuracy and low stray light.
- Long-life environmental deuterium lamp uses a flange mount; replacement does not require optical adjustment.
- Real-time spectrum/data saving, power-off retention, printing and PC export are supported.

Application Scenarios

- Routine photometric and transmittance/absorbance analysis.
- Quantitative concentration testing by coefficient or standard-curve methods.
- Wavelength scans and time-scan / kinetics measurements.
- DNA/protein and multi-wavelength measurements.
- Scientific research and general laboratory analysis.

Measurement Principle

The instrument uses a double-beam optical path and a holographic diffraction grating. The reference and sample paths are compared to reduce system drift and compensate for ratio changes, supporting stable long-time measurements. The instrument records transmittance, absorbance or energy across the UV-Vis range and converts the measured signal into quantitative, scan or kinetics results according to the selected method.

Technical Specifications

Item	Specification
Spectral bandwidth	2.0 nm
Wavelength range	190–1100 nm
Optical system	Double-beam optical path; holographic diffraction grating
Wavelength accuracy	Not specified in source PDF
Wavelength repeatability	≤0.2 nm
Wavelength setting	Automatic wavelength setting; wavelength resolution 0.1 nm
Stray light	≤0.5%T (220/360 nm)
Baseline drift / stability	≤0.001 A/h (500 nm, 0 A)
Baseline flatness	±0.0015 A
Scan speed	High, medium and low; adjustable
Detector	Imported silicon photodiode
Display	6-inch, 320 × 240 dot-matrix LCD
Light source	Imported long-life tungsten and deuterium lamps; no optical adjustment
Data interface	USB
Keyboard	Digital touch membrane keys
Photometric range	0–200%T; –0.3–3A; 0–9999C; 0–9999F
Print output	Mini printer; PC printer (online)
PC software	PC quantitative analysis software (optional)
Power supply	AC 90–250 V, 50/60 Hz
Dimensions / weight	545 × 468 × 245 mm / 20 kg
Photometric accuracy	±0.002A (0–0.5A); ±0.004A (0.5–1A); ±0.3%T (0–100%T)
Photometric repeatability	≤0.001A (0–0.5A); ≤0.002A (0.5–1A); ≤0.15%T (0–100%T)
Noise	±0.1%T (0%T line); ±0.3%T (100%T line); ±0.0005A (500 nm)

The source PDF prints no numeric value for wavelength accuracy; this field is intentionally marked as not specified rather than supplemented from another model.

Measurement and Data Functions

Measurement Functions

- Photometric measurement: transmittance T%, absorbance Abs and energy E.
- Quantitative testing: concentration C using coefficient or standard-curve methods.
- Wavelength scan: user-set scan range, interval and speed.
- Time scan / kinetics: monitor changing spectra and calculate reaction rate.
- DNA/protein measurement: direct ratio and concentration display with user-defined methods.
- Multi-wavelength testing: simultaneous results at multiple arbitrary wavelengths.

Output and Communication

- USB data interface.
- Mini printer and online PC printer output.
- Optional PC quantitative analysis software.
- Spectrum/data processing, report printing, data export and power-off retention.

Mechanical Dimensions / Installation

Instrument dimensions are 545 × 468 × 245 mm and weight is 20 kg. The wide sample compartment accommodates 5–100 mm cuvettes. The supplied source material does not include a separate dimension drawing or wiring diagram; installation and accessory arrangement should therefore follow the final configuration and user manual.

Product Selection / Ordering Information

Selection	Configuration
Base model	SP 101Z – Double-Beam UV-Vis Spectrophotometer
Software	Optional PC quantitative analysis software
Print output	Mini printer; online PC printer
Sample accessories	Accessories supported; final selection depends on the measurement configuration

Specify SP 101Z together with the required software, printer and sample accessories. Final configuration is subject to the product order and the source-listed options.

CONTACT / SUPPORT

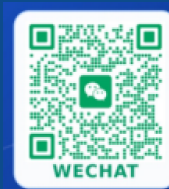
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