



# Spectro UV-VIS Double Beam PC Scanning Spectrophotometer

**Model UVD-2950**



Spectro UV-Vis Double PC (Model UVD-2950) is a high performance UV-Vis double beam automatic scanning spectrophotometer. It is a two (2) cell spectrophotometer with a fixed bandwidth of 1.0 nm. Model UVD-2950 spectrophotometer offers high performance, ease of use and reliability, which can be used in various applications. Spectrophotometer Model UVD-2950 can be used extensively for qualitative and quantitative analysis in such fields as pharmaceutical inspection, clinical analysis, petro-chemistry laboratories, chemistry and biochemistry laboratories, DNA/RNA analysis as well as in quality control departments, i.e. environmental control, water management, food processing, and agriculture. Spectro UV-Vis Double PC (Model UVD-2950) utilizes a new optical system design and is microcomputer controlled. With its **focused-beam design**, the system provides optimal and reproducible results for small samples. The sample beam and the reference beam are provided within the same sampling space which in turn facilitates wider and longer scan of data providing a more detailed view of the results in an easy to use environment. This instrument has excellent baseline stability and high resolution and permits scanning, quantitative analysis, kinetic spectrophotometric analysis and DNA/RNA analysis through PC control. This product is capable of processing data, from analytical and spectrum testing.

Spectro UV-Vis Double PC (Model UVD-2950) has a large **LCD screen** which displays the menu screen and of course makes the device user friendly. Additionally, this instrument has a powerful built-in software which permits the apparatus to be linked to a computer and a printer to display the photometric and spectral data on the PC monitor.

Spectro UV-Vis Double PC (Model UVD-2950) with fixed bandwidth of 1 nm is a **high-performance, reliable, and exceptional value instrument** which is the hallmark of Labomed UV-Vis spectrophotometers.

Labomed, Inc. is certified by ISO-9001-2000, has CE Conformity and is FDA Licensed.

## Features

- **Baseline Stability:** The Double beam monitoring ratio system enhances baseline stability.
- **Excellent Resolution:** The big-caliber light path enhances the instrument's energy, reduces its noise and raises its resolution performance
- **2 Cell Holder:** Spectro UVD-2950 has 2 cell holder for reference (standard) and sample.
- **User-friendly light source:** The socket deuterium lamps and tungsten lamps facilitate light source replacement, simplify maintenance and reduce operation error.
- **Convenient Display:** The large backlit LCD screen displays both photometric values and spectral curves.
- **Full use of Computer Technology:** Being computer controlled with RS-232 interface and working on the Windows platform with the UV/Win application software.
- **The key components** adopt all from the world famous manufacturer, such as deuterium lamp, silicon photodiode and holographic grating, which ensures the stabilization and credibility of the Instrument for extended life.
- **Computer System** is optional (NOT INCLUDED).

## Accessories

- |  |                                      |  |
|--|--------------------------------------|--|
| 2 Fixed Cell Holder (one reference and one sample) | 1 Power cable                        | 1 Block Light Cell                           |
| 4 Optical Glass Cells 10mm.                        | 1 PC cable                           | 1 Extra fuse                                 |
| 2 Quartz Cells 10mm.                               | 1 Software CD for Windows 98/2000/XP | <i>Optional:</i> Peltier Kinetic Test System |
| 1 Dust cover                                       | 1 Software Operation Manual          | <i>Optional:</i> Sipper Flow Through System  |
| 1 Instruction manual                               | 1 Spare Tungsten Halogen Lamp        |  |



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## Software Specifications

### Monoprocessor Built-in Application:

Photometric Measurement: Measuring transmittance or absorbance at the current wavelength together with K factor calculations.  
 Spectrum Scan: Carrying out scanning of transmittance or absorbance on the selected wavelength range together with peak-pick module.  
 Quantitative Determination: Regression of standard curves and direct determination concentration of samples.

### PC Windows Application Software (RS-232 Interface) to link Spectro to computer and printer:

Photometric Measurement: Measuring the photometric values at 1-10 wavelengths together with mathematical calculations according to entered quotations.  
 Spectrum Scan: Producing Wavelength scans within the operating parameters on samples together with powerful data handling facilities.  
 Quantitative Determination: Determination of unknown concentration with methods of 1-3 wavelength quantitation, together with fitting of calibration curve of 1st ~ 4th order.  
 Kinetics: Recording curves of changing photometric values of samples against timecourse at the selected wavelengths together with powerful data handling facilities.  
 Output: With the Windows clipboard, the measured data and graphics can be copied to other applications software for reports.

## Technical Specifications

Wavelength range:	190 nm – 1100 nm	Baseline Stability:	0.008Abs/h (500 nm., after preheating).
Spectral Bandwidth:	1.0 nm	Slew Rate of Wavelength:	3600nm/min
Resolution:	0.1nm.	DNA/RNA Measurement:	Results Printout: Printing of measured data by using any Printer with Parallel Port connection available.
Straylight:	0.2%T (220 nm and 340 nm)	Mainframe:	Compact and standalone spectrophotometer mainframe
Wavelength accuracy:	0.5 nm (with automatic wavelength correction).	Light Source:	Socket Deuterium Lamp and Socket Tungsten Halogen Lamp
Wavelength Reproducibility:	0.2 nm	Detector:	Double Beam
Photometric System:	The double-beam monitoring ratio system.	Sample Chamber:	2 cell holder
Photometric Method:	Transmittance, absorbance, energy, concentration	Display	Liquid Crystal Display (LCD 320/240 dot matrix)
Photometric Range:	-0.3~3.0 Abs (0~200%T)	Keypad:	Touch soft keys.
Photometric Accuracy:	0.002Abs (0~0.5Abs) , 0.004Abs (0.5~1.0Abs), ±0.3%T (0-100%T)	PC Interface:	PC Interface: RS-232
Photometric Reproducibility:	0.001Abs (0~0.5 Abs), 0.002Abs (0.5~1.0Abs), 0.15%T (0~100%T),	Size:	22"x16"x10"
Photometric Display:	-9999 ---- 9999	Weight:	55 Lb
Photometric Noise:	< ±0.001Abs (500nm, 0Abs, 2nm Bandwidth)		
Scanning Speed:	1400nm/min		
Baseline Flatness:	0.002Abs (190 nm. ~1100 nm.)		