



Spectro UV-Vis Dual Beam PC

Split Beam, UV-Vis, Scanning Spectrophotometer with Auto 8 Cell holder



Spectro UVS-2700 and Spectro UVS-2800

The **Spectro UV-VIS Dual Beam PC**, catalog number UVS-2700, is a precision **scanning, uv-visible range** spectrophotometer with a microprocessor controlled automatic, 8 position, 2 row cell holder that moves noiselessly. Its **split beam optical system** uses **dual detectors**. For "stand alone" use, the instrument is microcomputer-controlled and has a large LCD display. Powerful **PC based software** applications can be run by linking the **Spectro UV-Vis Dual Beam PC** to a PC via the instrument's **RS232C interface** and using **Labomed's UV-Win software (included)**. The many software local control and PC based software applications include DNA/RNA measurement. Kinetic tests can be performed by using the single cell **optional peltier constant temperature system**, and faster batch analyses can be done using the

optional Sipper flow-through system.

A **fixed, 2nm spectral bandwidth version** of the Spectro UV-VIS Dual Beam PC is available as catalog no. UVS-2700 and a **version with variable bandwidths of 0.5, 1.0, 2.0 and 5.0 nm** is available as catalog no. UVS-2800.

The Spectro UV-VIS Dual Beam PC can be used as an accurate system for research as well as quality control and academic applications in biochemistry, clinical chemistry, petrochemistry, pharmaceutical, agricultural, environmental labs as well as general industrial labs.

Features

- **Baseline Stability:** The Split-beam monitoring ratio system enhances baseline stability.
- **Excellent Resolution:** The large-caliber light path enhances the instrument's energy, reduces its noise and increases its performance at high resolution.
- **Automatic successive measurement:** The automatic eight-cell sample holder offers automatic measurement of eight samples in succession. It can be used for one-touch measurement of the drug dissolution of seven samples and a blank.
- **User-friendly light source:** The sockets for the deuterium lamp and tungsten lamp facilitate light source replacement, simplify maintenance and reduce operation error.
- **Convenient Display:** The large backlit LCD screen displays both photometric values and spectral curves in local control.
- **Full use of Computer Technology:** The UV-Vis Dual Beam PC can be computer controlled through an RS232C interface and is compatible with the latest Windows platforms running Labomed's UV-Win application software.
- **The key components** include the deuterium lamp, silicon photodiode detectors and the holographic grating, which ensures the stabilization and credibility of the instrument performance for extended life.

Functions

- **1) Photometric Measurement:** Rapid and accurate measurements of transmittance and absorbance for samples at selected wavelength are available.
 - This module allows successive and automatic measurement of up to seven samples using the built-in 8-cell sample holder.
 - Direct concentration results can be produced by simply entering the K-factor.
 - Printout of measured data with sample numbers in a tabular format is available.
- **2) Spectrum Scan:** Spectra of samples on any range between 1100nm ~ 190 nm can be measured with real time visual display on the large LCD screen.
 - Parameters such as photometric mode, wavelength range, ordinate range, wavelength interval and scanning speed can be set.
 - Peaks and valleys for spectral curves can be labeled and printed.
 - Printout of spectral curves can be sent to an HP 600/800 printer.
- **3) Quantitative Measurement:** A calibration curve can be used to determine the concentration of unknowns at the user-selected wavelength.
 - A regression analysis of a calibration curve can be made with up to 8 standards which includes the linear correlation coefficients.
- **4) Windows Software:** Such operations as photometry, spectral scanning, quantitation and kinetic measurement are included in the UV-Win Windows applications software.
 - Up to 10 Spectra and time-course curves can be measured and recalled from memory with data-handling functions including arithmetic calculation, logarithmic calculation, reciprocal calculation, smooth, derivative (1-4th order), Abs to/from %T conversion and peak pick.
 - Up to 8 standards can be entered and measured for 1st to 4th order fitting of calibration curves.
 - With the Windows clipboard, the measured data and graphics can be copied to other applications software for reports.
- The plot of a calibration curve can be displayed on the large LCD screen.
- Instant concentration results can be produced by simply entering K-factors.
- Successive and automatic calibration and concentration measurement of up to seven samples are available by using the built-in 8 cell sample holder.
- A printout of the table of measured concentrations and K-factors of a calibration curve is available.

Model UVS-2700

Model UVS-2800

Technical Specifications

OPTICAL SYSTEM:	Dual Beam
- Wavelength range:	190 nm - 1100 nm
- Spectral bandwidth:	2,0 nm(UVS-2700) and 0,5-1,0-2,0 and 5,0 nm.(UVS-2800)
- Stray Light:	0.2%T (220 nm and 340 nm)
- Wavelength accuracy:	±0.3 nm (with automatic wavelength correction).
- Wavelength Reproducibility:	0.2 nm
PHOTOMETRIC SYSTEM:	The split-beam monitoring ratio system.
- Optical System:	The crossed monochromator with the high-resolution, diffraction holographic grating.
- Photometric Method:	Transmittance, absorbance, energy and concentration
- Photometric Range:	-0.3~3.0 Abs (0~200%T)
- Photometric Accuracy:	0.002Abs (0~0.5Abs), iÀ0.004Abs (0.5~1.0Abs), 0.3%T(0~100%T)
- Photometric Reproducibility:	0.001Abs (0~0.5 Abs), 0.002Abs (0.5~1.0Abs), 0.15%T (0~100%T)
- Baseline flatness:	0.001Abs (190 nm. ~1100 nm.)
- Baseline stability:	0.002Abs/h (500 nm., after preheating)
- Scanning Speed:	1400nm/min.
- Interface Card:	RS-232
- Detector:	Dual Silicon photodiodes
- Photometric Display:	-9999 ---- 9999
- Photometric Noise:	< ±0.001Abs (500nm, 0Abs, 2nm Bandwidth).
- Slew rate of wavelength:	3600nm/min.
DNA/RNA MEASUREMENT:	
- Results Printout.	Printing of measured data by using HP Deskjet 600/800 series (optional)
MAINFRAME:	Compact and standalone spectrophotometer mainframe
- Light Source:	Socket Deuterium Lamp and Socket Tungsten Halogen Lamp.
- Detector:	Dual Silicon photodiodes
- Sample Chamber:	Automatic eight-cell sample holder.
- Size:	22x16x10"
- Weight:	55 Lb.

Software Specifications

UV-Win software (via RS232 interface to link Spectro to the computer)
- Photometric Measurement: Measuring of the photometric values at 1-10 wavelengths together with mathematical calculations according to entered ecuations.
- Spectrum Scan: Tracing wavelength scans within the operating parameters on samples together with powerful data handling facilities.
- Quantitative Determination: Determination of unknown concentration using 1-3 wavelength measurements, together with fitting of calibration curve of 1st. through 4th order.
- Kinetics: Recording curves of the change of photometric values of samples at selected wavelength vs. time together with powerful data handling facilities.
- DNA/RNA/Protein Analysis: Printing of measured data by using HP Deskjet 600/800 Series (optional).
- Output: With the Windows clipboard, the measured data and graphics can be copied to other applications software for reports.

Accessories

- 8 square optical glass cells, 10mm path length
- 2 square quartz cells 10 mm path length, with lids
- 1 Dust cover
- 1 Instruction manual
- 1 Power cable
- UV-Win software is included
- Optional:** Peltier constant temperature system
- Optional:** Sipper flow through system