



# Spectro UV-Vis Double Beam Research Spectrophotometer



## Spectro UVD-3500

The **Spectro UV-Vis Double Beam UVD-3500** is Labomed's highest performance UV-Vis **double beam** automatic scanning spectrophotometer. In a double beam spectrophotometer, both sample and reference beams are provided in the sample compartment and are continuously compared, freeing you from the extra step of inserting your background solution and setting zero absorbance. Double beam spectrophotometers have the additional advantage of greater optical stability: **lower noise and drift**. Labomed's powerful **UV-Win PC software is included** to link the Spectro UV-Vis Double Beam to a PC to perform automatic spectral scanning, quantitative analysis, DNA/RNA/protein analysis and kinetic analysis. An **optional reflectance accessory** is available.

A convertible, **spectral bandwidth** Spectro UV-VIS Double Beam is **variable bandwidths of 0.1, 0.2, 0.5, 1.0, 2.0, and 5.0 nm** as catalog no. UVD-3500.

The Spectro UV-VIS Double Beam is designed to be used as a high performance system for research, but it can also be used in quality control and academic applications in biochemistry, clinical chemistry, pharmaceutical, agricultural, food, petrochemical and environmental labs as well as general industrial labs.

### Features

- The key components include** the tungsten-halogen/deuterium lamps, Czerny-Turner monochromator with a blazed holographic grating and a single photomultiplier detector which ensures the stabilization and high performance for extended life.
- Excellent resolution:** The optical system design allows spectral bandwidths to be set as small as 0.1nm, while still allowing photometric measurements to 4.000A.
- Baseline Stability:** The double-beam monitoring ratio system enhances baseline stability.
- Full use of Computer Technology:** The UV-Vis Double Beam is computer controlled through an RS232C interface and is compatible with the latest Windows platforms running Labomed's UV-Win application software.
- Versatile application:** Through the UV-Win PC software, you can perform high performance research measurements as well as routine measurements using a variety of optional accessories.
- Small beam cross section** allows high absorbance measurements to be made on micro samples.
- User-friendly light source:** The sockets for the deuterium lamp and tungsten lamp facilitate light source replacement, simplify maintenance and reduce operation error.
- Easy accessory replacement:** The detachable structure of the sample chamber facilitates the change of a wide range of optional accessories.

### Software Specifications

<b>UV-Win software:</b>	<b>Kinetics:</b> Recording curves of the change of photometric values of samples at a selected wavelength vs time together with powerful data handling facilities.
<b>Photometric Measurement:</b> Measurement of the photometric values at 1-10 wavelengths together with mathematical calculations according to entered equations.	<b>DNA/RNA/Protein analysis.</b>
<b>Spectrum Scan:</b> Tracing Wavelength scans within the operating parameters on samples together with powerful data handling facilities.	<b>Output:</b> With the Windows clipboard, the measured data and graphics can be copied to other applications software for reports.
<b>Quantitative Determination:</b> Determination of unknown concentration using 1-3 wavelength quantitations, together with fitting of calibration curve of 1st through 4th order.	

# Model UVD-3500

## Technical Specifications

<b>Optical System:</b>	Double Beam	<b>- Continuously variable</b>	
<b>- Wavelength range:</b>	190 nm - 900 nm	<b>spectral bandwidth from:</b>	0.1, 0.2, 0.5, 1.0, 2.0 and 5.0 nm.
<b>- Stray Light:</b>	0.02%T	<b>-Scanning Speed:</b>	1000 nm/min
<b>- Wavelength accuracy:</b>	±0.3 nm(automatic correction)	<b>-Interface Card:</b>	PC Compatible
<b>- Wavelength Reproducibility:</b>	0.1 nm	<b>-Detector:</b>	Hi sensitivity R928 multiplier detector.
<b>Photometric System:</b>	The double-beam ratio recording system.	<b>-Photometric Display:</b>	Unlimited
<b>- Optical System:</b>	The monochromator of Czerny-Turner configuration with high-resolution diffraction holographic grating.	<b>-Photometric Noise:</b>	< ±0.0003 Abs (500nm, 0Abs, 2nm Bandwidth)
<b>- Photometric Method:</b>	Transmittance, absorbance, reflectance, energy, concentration.	<b>-Slew rate of wavelength:</b>	2400nm/min
<b>- Photometric Range:</b>	-4.0 ~ 4.0 Abs	<b>DNA/RNA Measurement:</b>	
<b>- Photometric Accuracy:</b>	±0.002Abs(0~0.5 Abs) ±0.3%T(0~100%T)	<b>- Results Printout.</b>	
<b>- Photometric Reproducibility:</b>	0.001Abs(0~0.5 Abs) 0.001Abs (0.5~1.0 Abs) 0.15%T (0~100%T),	<b>Mainframe:</b>	Compact and standalone spectrophotometer mainframe
<b>- Baseline flatness:</b>	±0.001Abs	<b>- Light Source:</b>	Socket Deuterium Lamp and Socket Tungsten Halogen Lamp.
<b>- Resolution:</b>	0.1nm	<b>- Sample Chamber:</b>	With accesories like two-cell sample holder and optional integrating sphere.
<b>- Baseline stability:</b>	0.0004Abs/h (@ 500nm, after preheating)	<b>- Size:</b>	587mm. x 562mm. x 260mm.
<b>- Absorbance Range:</b>	-9.999 to 9.999 ABS	<b>- Weight:</b>	34 Kg.

## Accessories

- 4 Optical Glass Cells 10mm.
- 2 Quartz Cells 10mm.
- 1 Dust cover
- 1 Instruction manual
- 1 Power cable
- 1 PC cable
- 1 Software and Manual
- Optional:** Peltier constant temperature system
- Optional:** Sipper flow through system