

The Finnigan SpectraSYSTEM UV3000 is a revolutionary detector for HPLC that combines the superb optical performance and flexibility of a conventional UV/Vis detector with the spectral data capabilities of a PDA detector.

Finnigan™ SpectraSYSTEM™ UV3000 UV/Vis Detectors

Excellent optical performance
with capabilities of a diode array



- **Sensitivity of a single- λ UV/Vis detector with the qualitative capability of a PDA**
- **Unlimited applications flexibility with externally mounted flowcells**
- **A unique optical design for low refractive-index sensitivity**
- **High-speed scan mechanism achieves a slewing speed of 30,000 nm/sec and positional precision accuracy of < 0.01 nm**
- **Enhanced spectral resolution for increased selectivity**
- **Peak purity calculations, interactive library search, contour and 3-D plots with Atlas Spectral Analysis software**
- **Optimum sensitivity and selectivity with Thermo Electron columns**

The UV3000 detector delivers multi-dimensional spectral data for applications ranging from trace analysis to prep, as well as SFC to CE. Our powerful chromatography data system software provides complete system control, spectral analysis, and library search capabilities.

Superior Optical Performance

A unique dual-beam, forward optical design provides low noise and drift with a wide linear dynamic range, ensuring accurate results at high concentrations as well as trace analysis. Low refractive-index sensitivity delivers excellent baseline noise

stability when using gradients formed by low-pressure mixing. A tungsten lamp increases sensitivity in the visible wavelength range and eliminates the need for second-order blocking filters.

PC Software and Advanced Spectral Analysis

Easy-to-use Atlas™ 2003 software offers total system control and data collection. Complete data analysis can be performed using a wide range of integration and reporting options.

Spectral analysis software enhances Atlas 2003 with peak purity calculations and inter-active spectral library searches. Other spectral analysis features include both contour and 3-D plots. Chromatographic analysis features wavelength ratios, baseline subtraction, and mathematical manipulations including first and second derivatives.

The UV3000 is the ideal instrument for detecting a wide range of compounds found in pharmaceutical, biotechnology, environmental, and industrial applications.

Applications Flexibility

Thermo Electron provides a wide range of interchangeable flowcells for its UV/Vis detectors. Flowcells support applications including microbore LC, capillary electrophoresis and capillary LC, prep and semi-prep

SpectraSYSTEM UV3000 UV/Vis Detectors

LC, LC/MS, SFC and, of course, analytical LC. Each flowcell is optimized for its application, ensuring superior sensitivity with minimal peak dispersion and low refractive-index sensitivity.

Flowcells are placed at the end of the optical path. They mount externally and are pre-aligned for easy exchange with no tools required.

Instrument control and data acquisition are accomplished via RS232 serial communications directly with the PC. No additional proprietary interfaces are required.

Wavelength Range

190–800 nm

Wavelength Accuracy

± 2 nm

Wavelength Precision

< 0.01 nm

Bandwidth

6 nm

Absorbance Linearity

≤ 5% at 1.8 AU @ 257 nm*

*Based on ASTM E1657-94

Drift

UV3000 < 2×10^{-5} AU @ 254 nm

Slew Time

0.020 sec

Lamps

Deuterium and tungsten, pre-aligned

Rise Time

Digital filter, 0.0 to 9.9 sec

Recorder Outputs

3 unattenuated at either 10 mV, 100 mV or 1 V per 2 AU

Remote Controls

Autozero input, 25 pin RS-232

Dimensions

37 × 15 × 47 cm (H × W × D)

Weight

11 kg

Power Requirements

100/120/220/240 VAC; 50/60 Hz

High Sensitivity Mode

Number of wavelengths monitored: 1–3

Data Rate

24 points/sec

Noise

Single wavelength: $\pm 1 \times 10^{-5}$ AU @ 254

Scanning Mode

Scan Speed: 96–960 nm/sec

Data Rate

96 points/sec

Noise

$\pm 2 \times 10^{-5}$ AU @ 254 nm or 546 nm

Product Certification

TUV CUS

TUV CE Mark

FCC (EMI)

Part Number Description

UV3000-161 UV3000 Scanning Detector
10 mm Flow Cell

ATLAS-64010 Atlas 2003 Chromatography
Data System

ATLAS-64109 Atlas Spectral Analysis
Package

9551-0202 D2 Lamp

9551-0111 W Lamp

9550-0234S 10 mm, 15 μ L Flow Cell

A5183-010 Thermo Electron C8
Column 15 cm × 4.6 mm

A5765-010 SpectraSYSTEM
Accessory Rack

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