

**SL 159**

PRODUCT SPECIFICATION SHEET

# UV-Vis Spectrophotometer



UV-Vis  
Spectrophotometer

# SL 159



Multi Path Length



LCD Display



Cuvette



PC

Scanning UV-Visible Spectrophotometer.

Microprocessor based with Printer Interface.

Stable Single Beam Optics.

## SALIENT FEATURES

- Fully Automatic, user friendly and menu driven.
- Automatic Wavelength Calibration, Selection of Wavelength and Positioning of the sample holder.
- Programmable Wavelength for Lamp change over.
- Automatic 6 position cuvette holder for 10 mm path length cuvettes.
- Lamp selection enables conserving the life of the lamps.
- Stand alone unit offers an advanced technology with data processing features for Scanning, Discrete Wavelength, Concentration determination by standards and  $\epsilon$ -factor method, Time scan with minimum time interval of 1.0 sec, Auto-zero facility, self check and self diagnostic modes.
- Data in the form of graph and table can be printed directly on to a printer.
- Compact, Modular & Ergonomically designed.

## SOFTWARE FEATURES

- Optional Multi Tasking user friendly PC Software provides the Analysis to run all the features available in Standalone Unit and additionally has techniques to view, analyse and display upto 4<sup>th</sup> order derivate Spectra, overlay of maximum ten Spectra, Peak Picking Facilities, % Concentration mode, Auto Zero Facility, Spectra Zooming, Smoothing, Data Saving, Retrieval, Interpretation of Data and Printing.
- Software is 21 CFR Part 11 compliant with password method protection, Instrument logbook etc. cGLP compliance addressed.



Chemical



Agriculture



Pharmaceutical



MicroNutrients



Soil



Pesticide



Academic



Metals



Fertilizer



Cement



Dyes



Food & Beverages



Glass



Mines & Geology

## APPLICATIONS

- For any Spectrophotometric or Colorimetric measurement where applications require very high-resolution bandwidth and cGLP compliance is mandatory.
- Enzyme Kinetics.
- Micronutrients like N, P, K, S, Ca, Mg, Zn, Cu, B, Mo, etc., in Agricultural soil, Plants etc.
- Organic compounds in Biological matter.
- Glucose, Fructose, Carbohydrates, Proteins etc., in Foods.
- Edible Dyes, Alcohols etc., in Beverages.
- Purity of constituents in Pharmaceuticals.
- Toxic elements like Cadmium, Lead, Arsenic and Mercury etc., in Effluents.
- Constituents in compositions used in Metallurgy, Fertilizer, Pesticide, Chemical, Petrochemical, Steel, Cement, Glass & Other Industries.
- Life Science Applications.

# SPECIFICATIONS

## SPECTRAL

Range	190 to 1100 nm
Bandwidth	2 nm
Readability	0.1 nm
Accuracy	± 0.3 nm
Repeatability	± 0.2 nm

## LIGHT SOURCE

Deuterium Lamp (D<sub>2</sub>) & Tungsten (W) Halogen Lamp

## DETECTOR

Silicon Photo Diode

## PHOTOMETRIC

Range	± 2.500 Abs	
Accuracy	± 0.005 Abs at 1.0 Abs	
	± 0.010 Abs at 1.5 Abs	
Repeatability	± 0.003 Abs at 1.0 Abs	
Stability (Baseline)	± 0.003 Abs/hr. after 2 hour warm up	
Stray Light	< 1% T at 200 nm with KCl 12g/L	
	< 1% T at 220 nm with NaI 10g/L	
Readability	%T	0.01
	Abs	0.0001

## MONOCHROMATOR

Czerny - Turner type with 1200 lines/mm Holographic Diffraction Grating

## CONTROL

Standalone	Microprocessor & Micro controller
Optional	Through Computer

## PC CONNECTIVITY

USB Interface

## DATA PRESENTATION

Display	4 line 20 Character Dot Matrix Backlit LCD Module
Hard Copy	On Printer (Centronics)

## DATA PROCESSING

Standalone	Spectrum, Discrete Wavelength, Concentration, $\epsilon$ - Factor, Time Scan, Auto Zero and Printing.
PC Mode	Spectrum, Discrete Wavelength, Concentration, $\epsilon$ - Factor, Time Scan, Enzyme Kinetics, Overlay, Ratiometric, Peak Picking, Upto 4 <sup>th</sup> order Derivative, Spectra Zooming, Smoothing, Data Saving & Retrieving, Auto Zero facility and Printing

## POWER REQUIREMENT

90-260 V AC, 50-60 Hz, 1 $\phi$ , 170 VA Max.

## SAMPLE ATTACHMENT

Standard	Motorised 6 position Cuvette holder for 10 mm Path Length Cuvettes.
Optional	Motorised 2 position multi path Length Cuvette holder for 10, 20, 40 & 50 mm Path Length Cuvettes.

## ACCESSORIES SUPPLIED

With Instrument	10 mm Path length Cuvettes - 2 nos
At extra Cost	Multi Path length Cuvette holder, 10 mm, 20 mm, 40 mm, 50 mm and 100 mm Path length Cuvettes, Micro Cuvettes, PC, Spectratreats Software and Printer

## PHYSICAL DIMENSIONS

Size (WxDxH) in mm	520 x 395 x 180
Weight (in kg)	Approx. 17

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