

**ELICO**<sup>®</sup>  
Connecting Science & Lab



**DOUBLE BEAM UV-VIS  
SPECTROPHOTOMETER**

Low Bandwidth with High Resolution

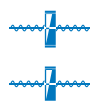
**SL 244**

PRODUCT SPECIFICATION SHEET



Double Beam UV-VIS  
Spectrophotometer

# SL 244



Double Beam



Touchscreen



Cuvette



PC

7" High Resolution Touch Screen LCD Color Graphical Display with Built in PC.

Supports USB-Pen Drive to Store/Retrieve Mass Spectral Data.

Smallest form factor Double Beam Spectrophotometer.

Low Bandwidth / High Resolution Bandwidth.

## SALIENT FEATURES

- ▶ Automatic wavelength calibration and programmable wavelength for lamp change over.
- ▶ Lamp selection enables conserving the life of the lamps.
- ▶ Built in Windows® Based PC Control.
- ▶ 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.
- ▶ Built in advanced Data Processing capabilities like 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 and Printing.
- ▶ Supports USB printing with PCL 5e class printers.
- ▶ Networking Connectivity through TCP/IP Interface.

## SOFTWARE FEATURES

- ▶ 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.
- ▶ 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.
- ▶ Micronutrients like N, P, K, S, Ca, Mg, Zn, Cu, B, Mo, etc., in Agricultural soil, Plants etc.
- ▶ Life Science Applications.

## SPECIFICATIONS

<b>SPECTRAL</b>		<b>PHOTOMETRIC</b>		<b>MONOCHROMATOR</b>
Range	190 to 1100 nm	System	Double beam optics	Concave holographic grating with 1200 lines/mm
Bandwidth	0.8 nm	Range	± 3 Abs	<b>CONTROL</b>
Readability	0.1 nm	Accuracy	± 0.005 Abs at 1.0 Abs ± 0.010 Abs at 1.5 Abs	
Accuracy	± 0.5 nm	Repeatability	± 0.002 Abs at 1.0 Abs	<b>PORTS</b>
Repeatability	± 0.2 nm	Stability (Baseline)	± 0.003 Abs/hr. after 2 hour warm up	
Operating Range	190 to 900 nm	Stray Light	<0.05% T at 220 nm with NaI 10g/L	TCP/IP Port - Network Connectivity
<b>LIGHT SOURCE</b>		Readability	%T	0.01
Deuterium Lamp (D <sub>2</sub> ) & Tungsten (W) Halogen Lamp			Abs	0.0001
<b>DATA PRESENTATION</b>		<b>DETECTOR</b>		
Display	7" ( 800 x 480) High resolution graphical display	Wide Range Photo Multiplier Tube (PMT)		
Hard Copy	On printer ( USB interface)	<b>SAMPLE ATTACHMENT</b>		
Soft Copy	Mass Data Storage through USB Pen Drive	Standard	Fixed 10mm path length Holders for Reference and Sample.	
<b>DATA PROCESSING</b>		Optional	Fixed multi path cuvette holders for Reference and Sample accommodating 10mm to 100 mm cuvettes.	
Spectrum, Concentration, Concentration by ε - Factor, Enzyme Kinetics, Overlay, Time Scan, Discrete Wavelength, Ratiometric, Peak Picking, Spectra Zooming, Smoothing, Data Saving & Retrieval, Auto Zero facility and Printing.			Fixed cuvette holder for Reference and 6 Position motorized 10 mm path cell holder for Sample.	
<b>ACCESSORIES SUPPLIED</b>			Fixed cuvette holder to accommodate micro cuvettes.	
With Instrument	10 mm Path length Cuvettes, Built in UV VIS <b>Spectratreats</b> ® Software	<b>PHYSICAL DIMENSIONS</b>		
At extra Cost	Multi Path length Cuvette holder, 10 mm, 20 mm, 40 mm, 50 mm and 100 mm Path length Cuvettes, Micro Cuvettes, USB Pen Drive and Printer	Size (WxDxH) in mm	500 x 375 x 230	
		Weight (in kg)	Approx. 15	

<b>DATA PRESENTATION</b>	
Display	7" ( 800 x 480) High resolution graphical display
Hard Copy	On printer ( USB interface)
Soft Copy	Mass Data Storage through USB Pen Drive

<b>DATA PROCESSING</b>	
Spectrum, Concentration, Concentration by ε - Factor, Enzyme Kinetics, Overlay, Time Scan, Discrete Wavelength, Ratiometric, Peak Picking, Spectra Zooming, Smoothing, Data Saving & Retrieval, Auto Zero facility and Printing.	

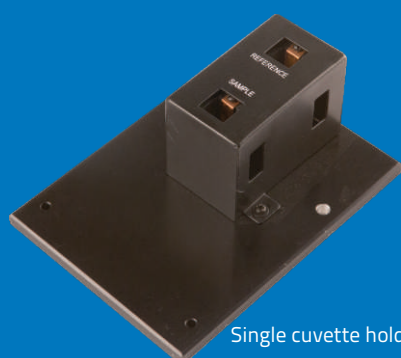
<b>ACCESSORIES SUPPLIED</b>	
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At extra Cost	Multi Path length Cuvette holder, 10 mm, 20 mm, 40 mm, 50 mm and 100 mm Path length Cuvettes, Micro Cuvettes, USB Pen Drive and Printer

<b>DETECTOR</b>	
Wide Range Photo Multiplier Tube (PMT)	

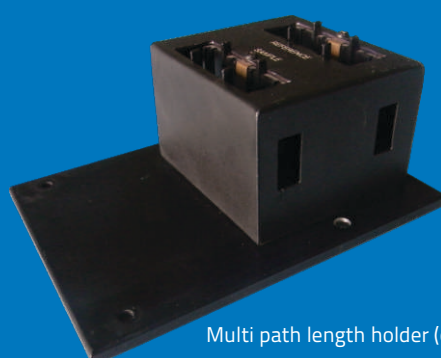
<b>SAMPLE ATTACHMENT</b>	
Standard	Fixed 10mm path length Holders for Reference and Sample.
Optional	Fixed multi path cuvette holders for Reference and Sample accommodating 10mm to 100 mm cuvettes.
	Fixed cuvette holder for Reference and 6 Position motorized 10 mm path cell holder for Sample.
	Fixed cuvette holder to accommodate micro cuvettes.

<b>PHYSICAL DIMENSIONS</b>	
Size (WxDxH) in mm	500 x 375 x 230
Weight (in kg)	Approx. 15

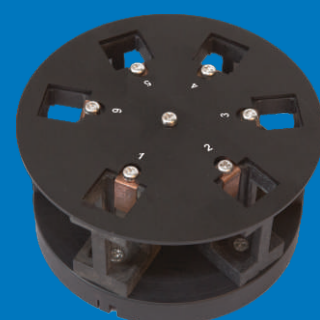
<b>POWER REQUIREMENT</b>	230 V ± 10% AC, 50 Hz, 1ϕ, 170 VA Max.
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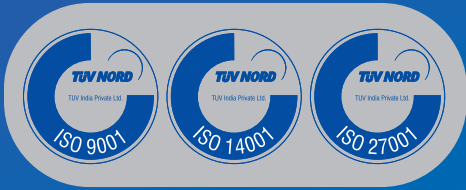
Single cuvette holder (standard)



Multi path length holder (optional)



6 cuvettes holder (optional)



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Specifications are subject to change as a process of continual development.

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