



# UV - VISIBLE SPECTROPHOTOMETER

## 108

0.5nm Bandwidth  
PMT Based



## 118

2nm Bandwidth  
Si-Photodiode

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### SYSTRONICS UV - VISIBLE SPECTROPHOTOMETER 108

(0.5nm bandwidth) is a high resolution, reliable and versatile, single beam, manual instrument for both qualitative and quantitative absorption spectrophotometric studies in Industrial, Agricultural, Chemical, Medical, Bio-technological, Forensic, Teaching and Research Institutions.

The wavelength range from 200 to 900 nm is obtained by a 1200 grooves/mm grating with Czerny - Turner mount. Sine bar linkage is used to get accurate wavelength calibration ( $\pm 0.5$  nm) on an electronic digital counter with a readability of 0.1 nm intervals. Fused silica deuterium lamp and tungsten halogen sources are used to cover the wavelength range. High sensitivity, wide range, low noise photomultiplier tube (PMT) is used as the detector. The grating spectral order interferences and stray light are eliminated by a set of filters mounted on a filter wheel.

This ensures almost constant throughput over the entire range and combined with fixed slit configuration leads to a constant resolution/constant noise spectrum. The photometric readings of percent transmittance, absorbance and concentration are displayed on an electronic digital display.

### SYSTRONICS UV - VISIBLE SPECTROPHOTOMETER 118

(2nm bandwidth) is a good resolution, reliable and versatile, single beam, manual instrument for both qualitative and quantitative absorption spectrometric studies in Industrial, Agricultural, Chemical, Teaching and Research Institutions.

The wavelength range from 200 to 1000 nm is obtained by a 1200 grooves/mm grating with Czerny - Turner mount. Sine bar linkage is used to get accurate wavelength calibration ( $\pm 1$  nm) on an electronic digital counter with a readability of 0.1 nm intervals. Fused silica deuterium lamp and tungsten halogen sources are used to cover the wavelength range. High sensitivity, wide range, Silicon photo diode is used as the detector. The grating spectral order interferences and stray light are eliminated by a set of filters mounted on a filter wheel.

This ensures almost constant throughput over the entire range and combined with fixed slit configuration leads to a constant resolution/constant noise spectrum. The photometric readings of percent transmittance, absorbance and concentration are displayed on an electronic digital display.

SPECIFICATIONS	108	118
Optics	Complete mirror optics with 1200 grooves/mm grating Czerny-Turner mount	Complete mirror optics with 1200 grooves/mm grating Czerny-Turner mount
Wavelength Range	200 to 900 nm (with Spl. PMT) 200 to 700 nm (with Std. PMT)	200 to 1000 nm
Readout	Electronic Digital counter 0.1 nm increments	Electronic Digital counter 0.1 nm increments
Accuracy	$\pm 0.5$ nm	$\pm 1$ nm
Repeatability	$\pm 0.2$ nm	$\pm 0.5$ nm
Spectral Bandwidth	0.5 nm (constant throughout the spectral range)	2 nm (constant throughout the spectral range)
Photometric Range (Digital)	0 to 2.000 Abs 0-1999 concentration units 0-100% transmission	0 to 2.000 Abs 0-1999 concentration units 0-100% transmission
Accuracy	$\pm 0.005$ Abs at 1 Abs	$\pm 0.005$ Abs at 1 Abs
Repeatability	$\pm 0.002$ Abs at 1 Abs	$\pm 0.002$ Abs at 1 Abs
Stray Light Source	Less than 0.1% at 220 nm & 370 nm • Tungsten-Halogen lamp • Deuterium lamp	Less than 0.1% at 220 nm & 370 nm • Tungsten-Halogen lamp • Deuterium lamp
<b>Detector</b>	<b>Wide range, low noise PMT</b>	<b>Wide range, Solid state, Silicon Photodiode</b>
Filters	Built - in filter wheel with four filters	Built - in filter wheel with four filters
Sample Holder	Manual 4-position sample changer for 10mm cuvettes (cells)	Manual 4-position sample changer for 10mm cuvettes (cells)
Power	230V $\pm$ 10%, 50Hz, 200VA	230V $\pm$ 10%, 50Hz, 200VA
Dimensions	800 (W) x 400 (D) x 300 (H) mm	800 (W) x 400 (D) x 300 (H) mm
Weight	32 kg. (Approx)	32 kg. (Approx)
Accessories	2 matched 10mm path length quartz cuvettes (cells)	2 matched 10mm path length quartz cuvettes (cells)
Optional Accessories	Single Position 20/50 mm Cuvette Holder (Factory Installed)	Single Position 20/50 mm Cuvette Holder (Factory Installed)

\*Technical Specifications, Appearance & model number are subject to change without prior notice in keeping up with the state of art.