

## Ultrospec 1000 UV/Visible Spectrophotometer

### Customization of Menu

The customization of the Ultrospec 1000 menu to suit laboratory needs is an important benefit of the instrument. This facility is password protected so that only authorized personnel are able to set up, or change, the instrument.

In a teaching laboratory, for example, a laboratory technician might choose to have only the modes of Absorbance, Factor Concentration and Time Intervals available. In the QC lab, the supervisor may choose to have Absorbance, Standard Concentration, Multi-point Standard Curve entry and Reaction Rate slope calculation. Similarly, a production line might have Absorbance and method 1 and method 2 as the instrument start up; in this case methods 1 and 2 could both be multi wavelength equations involving factors, and set up in the analytical laboratory for subsequent use by the process operators.

The advantages of customization, and the ability to conform with standard operating procedures, make Ultrospec 1000 the instrument of choice for routine use in many environments.

### Simple Lamp Change



The lamp assembly has been designed to make lamp changing very easy. There is no need to remove the instrument top cover - simply unscrew and remove the lamp cover at the back of the instrument, slide out the lamp assembly and replace with a new one. No lamp alignment is necessary as the lamps are pre-aligned during manufacture.

If a more basic model is required order the Ultrospec 1000E. It is a version of the Ultrospec 1000 which only has the basic measurement modes (absorbance, % transmission, factor concentration, time intervals and wavescan). It has no method storage and no output to a printer.

### Specifications

Wavelength Range	200 to 900 nm
Monochromator	Plane grating with 1200 lines/mm
Wavelength Calibration	Automatic upon switch on
Spectral Bandwidth	5 nm
Wavelength Accuracy	±2 nm
Wavelength Reproducibility	±0.5 nm
Light Sources	Tungsten halogen and deuterium arc
Detector	Single solid state silicon photodiode
Photometric Range	±0.300 to 3.000 A, 0.01 to 99999 concentration units, 0.1 to 200% T
Photometric Linearity	±0.5% or ±0.005 A to 2.000 A at 546 nm, whichever is the greater
Photometric Reproducibility	0.5% of absorbance value to 2.000 A at 546 nm
Stray Light	Typically < 0.2% T at 220 nm using NaI and < 0.2% T at 340 nm using NaNO <sub>2</sub> according to ANSI/ASTM E387-72
Stability	±0.002 A/h at 0 A after warm-up
Noise	±0.001 A near 0 A and ±0.002 A near 2 A at 600 nm
Analogue Output	100 mV per 1.000 A via interface lead
Digital Output	Centronics parallel (not bi-directional) as standard 9 pin serial via interface lead
Dimensions, H x W x D	190 x 300 x 400 mm (7.5 x 11.8 x 15.8 in)
Weight	6 kg (13.2 lb)
Power Requirements	90 to 265 V, 50/60 Hz, 100 VA
Safety Certifications	CE 89/336/EEC (EMC directive); CE 73/23/EEC (LV directive); EN-61010-1 (IEC1010-1)

### Catalog No. Product

CGS 8163.39	Ultrospec 1000 UV/Visible Spectrophotometer
CGS 8164.39	Ultrospec 1000E UV/Visible Spectrophotometer
CGS 8165.39	SWIFT 1000 Applications Software (requires serial interface adapter lead)
CGS 8166.39	2 Position Manual Cell Changer
CGS 8167.39	10 to 50 mm Cell Holder
CGS 8168.39	Water Heated Cell Holder (requires circulation bath)
CGS 8169.39	Peltier Heated Cell Holder, 25, 30, 37°C (requires temperature controller)
CGS 8170.39	Temperature Controller
CGS 8171.39	Fitting Kit for External Sample Delivery (requires peristaltic pump and 10 mm flowcell)
CGS 8172.39	Test Tube Holder
CGS 8173.39	Spare 10 mm Single Cell Holder
CGS 8174.39	Printer Stand
CGS 8175.39	Spare Ultrospec 1000 User Manual
CGS 8176.39	Custom Serial Interface Adapter Lead
CGS 8177.39	Chart Recorder Lead
CGS 8178.39	Tungsten halogen lamp
CGS 8179.39	Deuterium lamp
CGS 8180.39	Parallel printer cable
CGS 8181.39	Spare Ultrospec 1000 User Manual (multi language)
CGS 8182.39	Dust cover
CGS 8183.39	Basic UV/Visible Educational Booklet
CGS 8184.39	Basic UV/Visible Educational Poster