Spectronic Camspec Ltd   www.spectronic.co.uk

The M107 High Specification Visible Spectrophotometer

Using a reconfigured grating monochromator from the successful M105 and M106 models, the M107 offers more performance and versatility with only a modest price difference. The large sample compartment allows the use of a wide range of accessories, including a 4-position cell changer with holder for cell pathlengths up to 50mm. A membrane keyboard positioned next to the large, clear LCD display allows, the operator to rapidly switch between %T, Abs and Concentration modes and to set Zero Abs.

Signal processing and results display are microprocessor controlled and the narrow 5nm bandpass gives improved analytical sensitivity. The outstanding optical performance is also indicated by the low zero drift (<0.001A/hr) and the low stray light (0.1%T @ 340nm). Wavelength selection is by rotary control. This simple mechanism automatically selects the order sorting filters, offers permanent wavelength calibration and eliminates wavelength initialisation routines at switch-on.

The RS232 output provides a convenient link to a PC or a digital printer for hardcopy. A low-cost application program which runs under Windows®, includes the facility to create calibration curves. The reaction kinetics program, when used with the thermostatted cell holder accessory, provides an excellent low-cost enzyme analysis system.

Technical Specification

Display	4 lines x 20 character LCD
Light source	Tungsten-Halogen
Monochromator	1200 lines/mm grating
Detectors	Silicon Photodiode
Wavelength Range	325 - 1000nm
Wavelength Accuracy	± 2 nm
Wavelength Resolution	
Wavelength Repeatability	± 1 nm
Noise	< 0.001A @ 500nm 0A
Zero Drift	< 0.003A per hour after warm-up
Baseline Flatness	
Bandpass	5 nm
Stray Light	<0.1%T @ 340 nm
Photometric Accuracy	+/- 1% 0-2 A
Photometric Range	-1 to 2.5A, 0-125%T and -9999C and +9999C
Printer Interface	RS 232 for printer or PC
Computer Interface	Bi-directional RS232C for PC control
Power Requirements	110/120V, 220/230V, 50/60 Hz, 60VA
Dimensions	420 x 330 x 180mm packed 645 x 535 x 370mm
Weight	7Kg packed 10Kg

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M107 / M108 Accessories

The M107/M108 sample compartment (155 x 70 x 85mm) enables accessories to be exchanged in a few seconds.

10mm single cell or flowcell holder, P/N 107-102 Accepts standard rectangular and 4mm semi-micro 10mm pathlength cells, or a 10mm pathlength flowcell with Z=8.5mm.

Test-tube holder, P/N 107-101 This V-type round test-tube holder holds tubes of diameters from 10 to 25mm. The access hole in the sample compartment lid means that any height test-tube can be used. The design of the holder ensures the tube is always central in the light beam. This means that the light beam is not bent and so remains aligned with the detector. This accessory is mounted on the same base-plate as the single cell holder.

Thermostatted cell holder and front panel, P/N 107-105 Accepts a standard rectangular 10mm pathlength macro or 4mm semi-micro cell. Requires connection to an external circulating water bath.

Standard Four-position manual cell changer, P/N 107-103. (Supplied with M108). Accepts four standard rectangular 10mm pathlength macro or 4mm semimicro cells. The mechanical locating of the cell positions is very positive, giving excellent reproducibility.

Long pathlength Four-position manual cell changer, P/N 107-104. Accepts four standard rectangular 10-50mm pathlength macro cells.

M108 PC Application Software, P/N 108-110 For up to 3rd order concentration curves, timescans and wavelength scanning.

Printer, P/N 330-100 40 character impact printer including battery charger, spare ribbon and spare paper roll.