

# Spectrophotometers

## Spectrophotometers

### 1000 Series



Low cost, high specification instruments for UV and visible ranges. Frequent resetting of Absorbance Zero is NOT necessary due to the intrinsic electronic stability. As an alternative to cuvettes, the measurement procedure may be semi-automated with 'OPTION F' 'SIP sampling' which draws as little as 300 $\mu$ l of the liquid directly into the instrument at the touch of a key, making operation particularly quick and easy.

- Automatic lamp and filter selection according to selected wavelength
- Automatic self-test and calibration at switch-on
- Precise wavelength selection
- 0.1nm display for excellent reproducibility & accuracy
- Only six keys for simple operation
- Bi directional RS-232C computer interface
- Optional temperature control by water circulation
- Optional sample stirring
- Optional TIMEPLOT software for real time plotting of absorbance against time
- Lamps are guaranteed for minimum 1500 hours use

## Spectrophotometers

### 2000 Series



A range of fully programmable models designed to be tailored to the specific needs of every laboratory. For speed of multiple sample measurement or where only small samples are available, the optional Micro-Sipette should be used.

- A microprocessor-controlled pump draws as little as 300 $\mu$ l of the liquid directly into the instrument for measurement in a 10mm pathlength cell.
- Automatic lamp and filter selection according to selected wavelength
- Automatic self-test and calibration at switch-on
- Large screen, high resolution display with backlight
- Concentration curves displayed
- Plot of reaction kinetics can be displayed
- Excellent stability of Absorbance Zero (better than  $\pm 0.001$ A/hour)
- Storage of up to 30 calibration curves & data for instant recall
- Password protection of methods prevents unauthorised tampering
- Pre-programmed software options for Protein, DNA and other assays
- Optional software packages for specific applications
- Concentration measurements made by factor or calibration standard
- Lamps are guaranteed for minimum 1500 hours use
- Straight or curved reference lines may each be fitted to up to 30 calibration standards
- CE 2031 & CE 2041 include integral printer, essential for GLP
- Optional SCAN software displays spectra complete with labelled and tabulated peaks & troughs
- Pre-programmed software allows bespoke programs to be set up in minutes with enabling code (see Software Extension Modules under Accessories section)

### Comparison Chart

Series	1000	2000	3000
Optical bandwidth-nm	8	4	1.8
Wavelength range-nm	200 - 1000	190 - 1000	190 - 1000
Wavelength accuracy-nm	$\pm 1$	$\pm 1$	$\pm 1$
Wavelength reproductibility-nm	--	$\pm 1$	$\pm 1$
User-selectable scale expansion	--	--	1 - 100nm/cm
User-selectable scan speed	--	--	1 - 4000nm/cm
Straylight (typical)	$\pm 0.05\%$ at 220nm & 340nm	$\pm 0.01\%$ at 220nm & 340nm	$\pm 0.01\%$ at 220nm & 340nm
Absorbance range	-0.3 - 3.0A	-0.3 - 3.0A	-0.3 - 3.0A
Transmittance range	0 - 200%	0 - 200%	0 - 200%
Concentration range	0 - 9999C	0 - 9999C	0 - 9999C
Photometric accuracy	$\pm 0.005$ A @ 1A*	$\pm 0.005$ A @ 1A*	$\pm 0.005$ A @ 1A*
Photometric noise	$\leq \pm 0.0002$ A (500nm)	$\leq \pm 0.0002$ A (500nm)	$\leq \pm 0.0002$ A (500nm)
Baseline flatness (typical)	$\leq \pm 0.002$ A (300nm/min)	$\leq \pm 0.002$ A (300nm/min)	$\leq \pm 0.002$ A (300nm/min)
Baseline stability (at constant temp.)	$\leq \pm 0.001$ A/hour	$\leq \pm 0.001$ A/hour	$\leq \pm 0.001$ A/hour
Dimensions (H x W x D)-mm	200 x 480 x 340	205 x 480 x 340	205 x 480 x 340

\* Photometric accuracy will be 1%, if greater