



# T80

## UV-VIS SPECTROPHOTOMETER

**The T80 is a high performance double beam spectrophotometer available with a fixed (2nm) or variable (0.5, 1, 2, 5nm) spectral bandwidth, which is innovative in terms of instrument application, mechanical and optical design, electronic control and software whilst retaining features that are well established and accepted through the industry.**

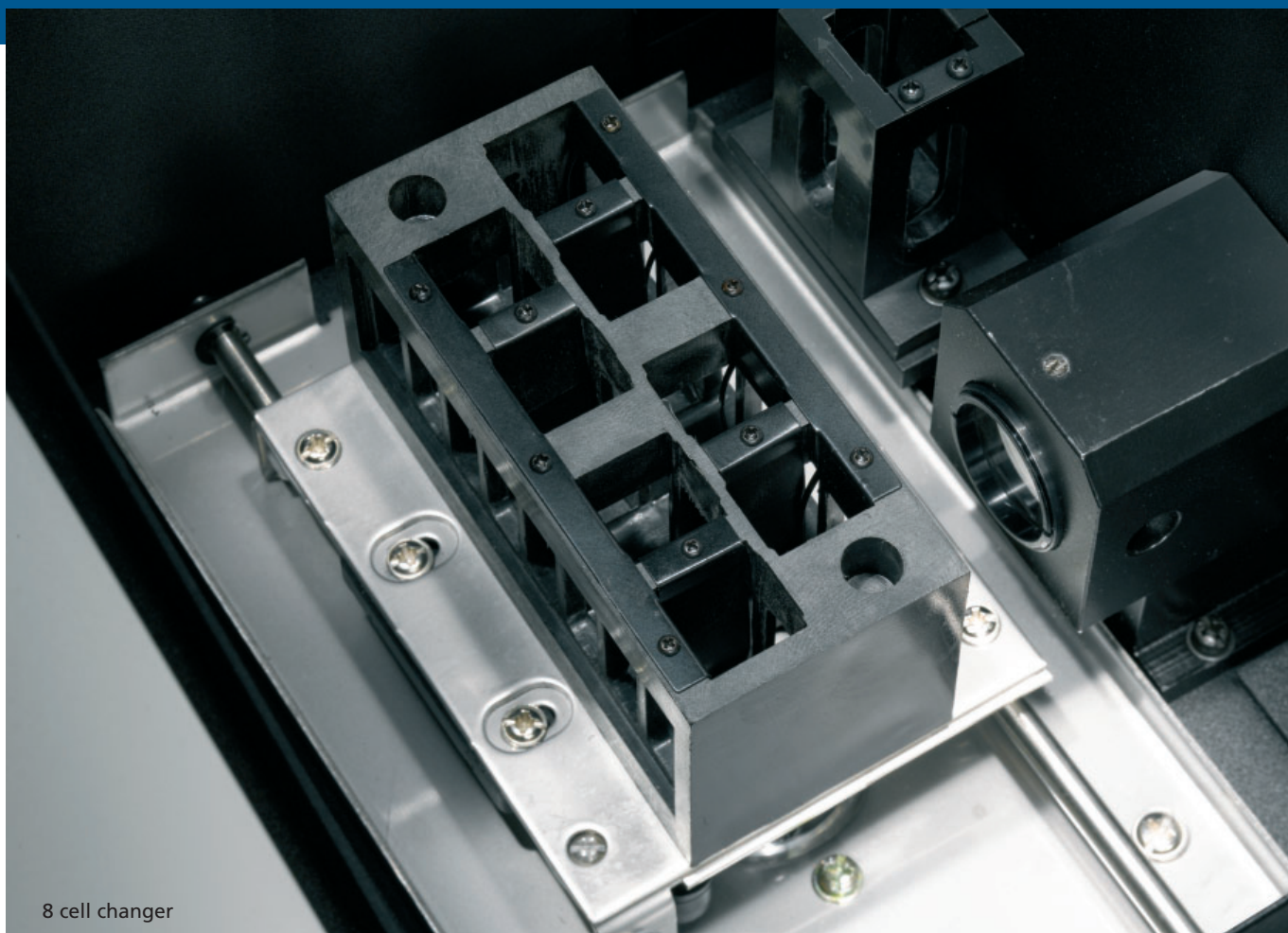
The T80 series of UV-Visible Spectrophotometers are able to carry out photometric measurement, spectrum scans, quantitative determination and DNA/Protein analysis.

When interfaced to a PC using the UV-Win software, many more features are available including three dimensional spectrum, kinetic measurements, method and data storage, exportation of data in multiple formats and GLP administration features. Both instruments have a spectral range of 190-1100nm.

**The T80 range consists of two models:**

T80 UV-Vis instrument offering a fixed bandwidth of 2nm.

T80+ UV-Vis instrument offering a variable bandwidth of 0.5, 1, 2 or 5nm.



#### FEATURES & FUNCTIONS

- High performance fixed (2nm) or variable (0.5, 1, 2, 5nm) spectral bandwidth.
- Wavelength accuracy  $\pm 0.3\text{nm}$ .
- Supplied with a motorised 8 cell changer and pre-aligned Tungsten and Deuterium lamps.
- Holographic blazed grating 1200 lines /mm.
- High degree of automation requiring minimal key depressions to start analysis.
- A number of optional accessories available which increase the flexibility of the instrument.
- Analysis for photometric measurement, spectrum scans, quantitative determination and DNA/Protein analysis.
- UV-Win software gives additional functionality including 3D spectrum analysis and compliance with GLP protocol.
- Simple mechanical structure and modular electronics make routine maintenance very easy.

#### OPTICAL SYSTEM & COMPONENTS

High quality optical components ensure reliable analytical data with low stray light achieved using very low noise electronic circuits.

The double beam optics ensure good optical stability.

Pre-aligned Deuterium and Tungsten light sources deliver superior stability across the full wavelength range. Both types of lamps are inexpensive and easy to replace when required.

The modular design allows easy access to all optical surfaces which can be easily cleaned to maintain optimum reflectivity over the lifetime of the instrument.

# Specifications

Instrument Type	T80	T80+
Optical System	Double beam	Double beam
Scan Speed	Selectable	Selectable
Wavelength Range	190 - 1100nm	190 - 1100nm
Wavelength Accuracy	±0.3nm	± 0.3nm
Wavelength Reproducibility	≤ 0.2nm	≤ 0.2nm
Spectral Bandwidth	2nm	0.5, 1.0, 2.0, 5.0nm
Photometric Mode	Transmittance, Absorbance, Energy Concentration	Transmittance, Absorbance, Energy Concentration
Photometric Range	-0.3 - 3.0Abs	-0.3 - 3.0Abs
Photometric Accuracy	0.002A (0 - 0.5A), 0.004A (0.5-1.0A), 0.3%T ( 0 - 100%T)	0.002A (0 - 0.5A), 0.004A (0.5 - 1.0A), 0.3%T ( 0 - 100%T)
Photometric Reproducibility	0.001A (0 - 0.5A), 0.002A (0.5 - 1.0A), 0.15%T ( 0 - 100%T)	0.001A (0 - 0.5A), 0.002A (0.5 - 1.0A), 0.15%T (0 - 100%T)
Photometric Noise	0.001A (500nm) 30min warm-up	0.001A (500nm) 30min warm-up
Baseline Flatness	0.0015A (20 0 - 1000nm)	0.0015A (20 0 - 1000nm)
Baseline Stability	0.0008A/h (500nm, 0Abs), 2hr warm-up	0.0008A/h (500nm, 0Abs), 2hr warm-up
Stray light	≤ 0.12%T (220nm NaI, 340nm NaNO <sub>2</sub> )	≤ 0.12%T (220nm NaI, 340nm NaNO <sub>2</sub> )
Standard Functionality	Photometric, Quantitative, Spectrum and DNA measurements.	Photometric, Quantitative, Spectrum and DNA measurements.
Cell Holder	Automatic 8 Cell changer	Automatic 8 cell changer
Detector	Silicon photo diode	Silicon photo diode
Light Source	Tungsten Halogen and Deuterium arc lamps	Tungsten Halogen and Deuterium arc lamps
Display	Digital LCD display	Digital LCD display
Printer	Not available	Not available
PC Interface	RS232/USB	RS232/USB
Software Support	Local and UV Win	Local and UV Win
Power Supply	Switchable 120 - 230VAC 50 - 60Hz	Switchable 120 - 230VAC 50 - 60Hz
Weight	25Kg	25Kg
Dimensions (Width, Depth, Height)	520mm, 420mm, 230mm	520mm, 420mm, 230mm