UV-340
UV-Vis Spectrophotometer

UV-340 scanning UV-Vis spectrophotometer is a single beam stand-alone model with fixed bandwidth of 2nm, providing excellent performance for measurements in the range of 190nm to 1100nm. It has a large graphic LCD screen for menu and spectrum display. The large sample compartment accommodates a wide range of cell holders and accessories including sipper and peltier system. Optional Advanced Windows software can fully control the instrument makes it very versatile.
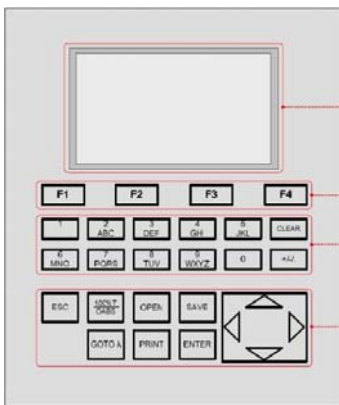

Specifications

Wavelength Range	190 - 1100nm
Bandwidth	2nm
Optical System	Single beam, grating: 1200 lines/mm
Scanning Speed	Hi, Med, Low (Max 3000nm/min)
Wavelength Accuracy	± 0.5nm
Wavelength Resolution	0.1nm
Wavelength Repeatability	0.3nm
Photometric Range	0 - 200%T, -0.3 - 3.0A, 0 - 9999Conc
Photometric Accuracy	± 0.5%T or ± 0.003A@1A
Stray Light	0.05%T @220nm and 360nm
Stability	± 0.002A/h @500nm
Display	5" graphic LCD (320 x 240 dots)
Baseline Flatness	± 0.002A (200 - 1000nm)
Standard Holder Installed	4-position 10mm cuvette holder
Light Source	Tungsten halogen & Deuterium lamp
Data Output	USB and parallel
Power	220 - 240VAC/50Hz or 110 - 120VAC/60Hz
Dimensions	480 x 360 x 160mm
Weight	14kg

Features

- Large graphic LCD (320 x 240 dots) and easy operation

- Automatic wavelength scanning

- Stand-alone model with full functions available eliminating the need of a computer

- Pre-aligned design ensures easy lamp replacement

- Large sample compartment to accommodate various holders and accessories

- Real–time clock for date and time stamping of results

Stand-alone model has built-in software for full functions, thus eliminating the need for optional Windows analysis software (with a protection dongle) to control the spectrophotometer via a PC

Through the control panel, user can perform all operations by pressing the keys and all the results and operation information are displayed on the LCD. Available functions include photometry, quantitative, wavelength scan, kinetics, DNA/protein, multi-wavelength and system utilities.

The latest model has a USB port near LCD, to be plugged with an USB flash drive for storing test data which can be opened and processed by the provided free Windows analysis software (without a dongle) after the testing.
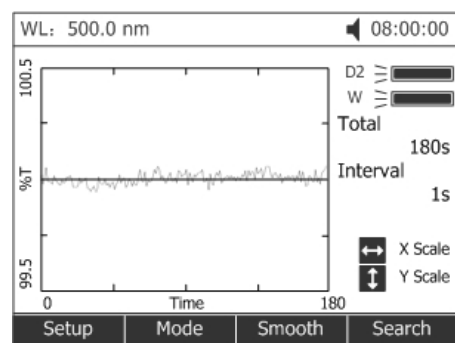
Functions

1. Main Menu and Basic Mode

There are seven items in Main Manu. In Basic Mode, Absorbance, %T or Concentration can be measured. Units such as ug/mL, mg/mL, mg/L, g/L, mM/L, M/L etc. may be selected.
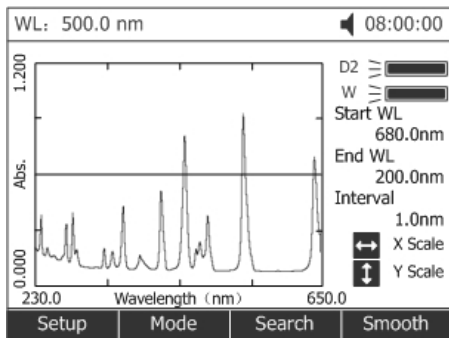
2. Quantitative (Standard Curve)

Up to 10 standard solutions can be used to establish calibration equation to measure the concentration of unknowns. There are four fitting options: linear fit, linear fit through zero, square fit and cubic fit.
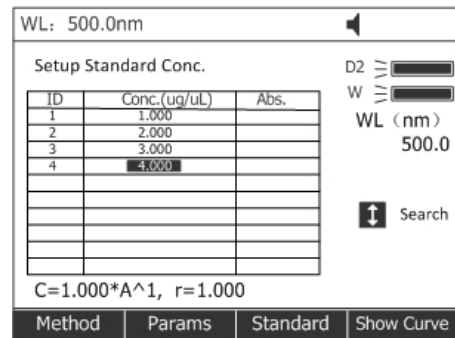
3. Wavelength Scan

The scan intervals are 0.1, 0.2, 0.5, 1, 2, 5nm, and Hi, Medium and Low scan speeds are available. Scan speeds vary from 100 to 3000 nm/min. Wavelengths are scanned from high to low so that the instrument waits at high wavelength. Post-run manipulation includes re-scaling axes, curve tracking and peak picking.
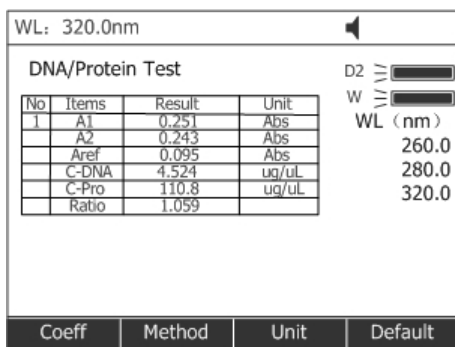
WL: 500.0 nm	◀ 08:00:00

```
1.200                                    D2 ≧ ▬
                                          W  ≧ ▬
                                          Start WL
                                             680.0nm
 Abs.                                     End WL
                                             200.0nm
                                          Interval
                                             1.0nm
 0.000                                    ↔  X Scale
       230.0   Wavelength（nm）  650.0    ↕  Y Scale
```

Setup	Mode	Search	Smooth

4. Kinetics

Real time measurement of Abs. vs. time can be used for time course scanning or reaction rate calculations. Wait time and measurement time up to 12 hours may be entered with time intervals of 0.5, 1, 2, 5, 10, 30 seconds and 1 min. Post-run manipulation includes re-scaling, curve tracking and partial curve selecting required for the rate calculation.
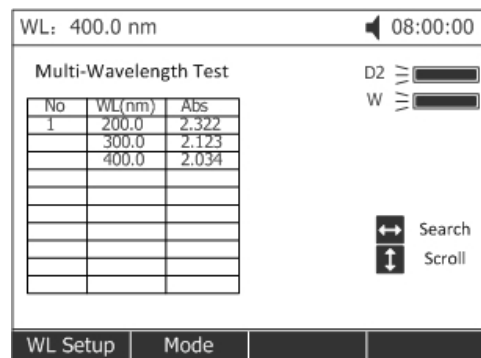
WL: 500.0nm	◀

Setup Standard Conc.

ID	Conc.(ug/uL)	Abs.
1	1.000	
2	2.000	
3	3.000	
4	4.000	

D2 ≧ ▬
W ≧ ▬
WL（nm）
500.0

↕ Search

$C=1.000*A^\wedge 1, \ r=1.000$

Method	Params	Standard	Show Curve

5. DNA/Protein

Concentration and DNA purity are calculated absorbance ratios 260nm/280nm or 260nm/230nm with optional subtracted absorbance at 320nm

DNA Concentration $= 62.9 \times A_{260} - 36.0 \times A_{280}$

Protein Concentration $= 1552 \times A_{260} - 757.3 \times A_{280}$

Other wavelengths and factors may be entered.

WL: 320.0nm	◀

DNA/Protein Test

No	Items	Result	Unit
1	A1	0.251	Abs
	A2	0.243	Abs
	Aref	0.095	Abs
	C-DNA	4.524	ug/uL
	C-Pro	110.8	ug/uL
	Ratio	1.059	

D2 ≧ ▬
W ≧ ▬
WL（nm）
260.0
280.0
320.0

Coeff	Method	Unit	Default

6. Multi-Wavelength

Up to 10 wavelengths can be entered, allowing the measurement of multiple wavelengths on a series of samples.

WL: 400.0 nm	◀ 08:00:00

Multi-Wavelength Test

No	WL(nm)	Abs
1	200.0	2.322
	300.0	2.123
	400.0	2.034

D2 ≧ ▬
W ≧ ▬

↔ Search
↕ Scroll

WL Setup	Mode		

Data Storing and Post-Test Data Processing

There is an USB port for the latest model near LCD to be plugged with an included USB flash drive for storing test data which can be opened and processed by the provided free Windows software (SS-300 without a dongle) after the testing

Optional Advanced Windows software

The Windows based PC application software with a protection dongle takes the full functions of the stand-alone version plus more powerful data processing and expanded data collecting and storage capability. It comes standard with PC models or is optional to a stand-alone model.

Optional Accessories

There is a wide range of accessories including different cell holders, sipper and peltier system etc available to satisfy the different analysis requirements. Please refer to the spectrophotometer accessory section from our website.

Packing list (stand-alone model)

Description	Qty
Spectrophotometer	1
10 mm Optical Square Cuvette	1 set of 4
10 mm Quartz Square Cuvette	1 set of 2
4-Position 10mm Cuvette Holder	Installed
USB Flash Drive (8GB)	1
Software CD (without dongle)	1
User Manual	1
Dust Cover	1
Power Cord	1

Order Information

Part No.	Description	Note
UV-340	UV/Vis Spectrophotometer	Stand-alone model
UV-340PC	UV/Vis Spectrophotometer	PC model (with SS-300)
SS-300	Advanced Windows software	Manual, CD, USB cable and dongle

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