SPECTRO V11D/UV11D

V11D is the only model of manually setting wavelength in MRC families, but precise design and high quality components ensures excellent performance. It is widely used in high schools & colleges for general analysis & experiments. Include basic software, 10mm 4 cell Holder 4x Glass 10mm cuvette.

Model	SPECTRO-V11D	SPECTRO-UV11D
Wavelength range	325-1000nm	200-1000nm
Spectral Bandwitch	4nm	
optical system	Single Beam , Grating 1200 lines/mm	
Wavelength Accuracy	±2nm	
Wavelength Repeatability	1nm	
Wavelength Setting	Manual	
Photometric Accuracy	≤ ±0.5%T or ±0.003A@1A	
Photometric Range	0-200%T , -0.3 -3A, 0-1999Conc.	
Stray Light	0.3%T	
Stability	±0.004A/h @500nm	
Display	128*64 Dots LCD	
Photometric Mode	T, A, C, F	
Detector	Silicon Photodiode	
Standard Cell Holder	4-position 10mm cell changer	
Sample Compartment	Standard 10mm pathlength cuvette	
Light Source	Tungsten Lamp	Tungsten & Deuterium lamp
Output	USB Port & Parallel Port (printer)	
Power Requirement	AC 85V~265V 50/60Hz	
Dimensions (WxDxH)	480x360x160mm	
Weight	10kg	12kg

Features:

- Large LCD Screen (128x64 Dots).
- Wavelength can be read out from the screen directly.
- Auto Zero and Blank.
- Parallel port, printed directly.
- Large sample compartment, it can accommodate 5-100mm path length cuvettes with optional holders.
- Pre-aligned design ensures the user can change lamp conveniently.
- Optional software PC software M.Wave Professional can expand the applications to Standard Curve Kinetics & wave length scan.
- High quality silicon photometric diode detector and 1200 lines/mm grating ensure high accuracy and precision.

SPECTRO-V12/UV12/UV11

SPECTRO-V/UV-12, UV-11 spectrophotometer is the ideal instrument for education and QC laboratories. Using your standard sample solutions, you can get a standard curve on the large LCD screen. They are widely used in colleges and enterprises for general quantitative analysis and experiments. Include basic software, 10mm 4 cell Holder 4xGlass 10mm cuvette.

Features:

- Large LCD screen(128x64 Dots)
- Can display total 50 groups of data, 3 groups per screen. Can display standard curve and the curve equation.
- System can also save the test results. Total 200 groups of data and 100 standard curves can be saved; it is convenient for check and reload.
- Data can be restored after a sudden power cut.
- Auto setting wavelength.
- Tungsten lamp & Deuterium lamp can be tuned on/off individually to extend lifetime.
- Pre-aligned design makes it convenient to change lamps.
- Large sample compartment, it can accommodate 5-100mm path length cuvettes with optional holders. A variety of optional accessories are available.
- The optional application software M.Wave Professional provides complete control of the spectrophotometer through the Built-in USB port. You can achieve the following functions: **I.** Quantitative; **II.** Kinetics; **III.** Wavelength Scan; **IV.** Multi Wavelength; **V.** DNA/Protein.

Model	SPECTRO-V12	SPECTRO-UV12	SPECTRO-UV-11
Wavelength range	325-1000nm	200-1000nm	
Spectral Bandwidth	4nm		
optical system	Single Beam , Grating 1200 lines/mm		
Wavelength Accuracy	±2nm		
Wavelength Repeatability	0.8nm	1nm	
Photometric Accuracy	≤ ±0.5%T or ±0.003A@1A		
Photometric Range	0-200%T , -0.3 -3A, 0-9999Conc.		
Stray Light	0.3%T		
Stability	±0.002A/h @500nm		
Detector	Silicon Photodiode		
Standard Cell Holder	4-position 10mm cell changer		
Sample Compartment	Standard 10mm pathlength cuvette		
Light Source	Tungsten Lamp	Tungsten & Deuterium lamp	
Output	USB Port & Parallel Port (printer)		
Power Requirement	AC 110/220V 50/60Hz		
Dimensions (WxDxH)	470x370x180mm		
Weight	12kg	14kg	

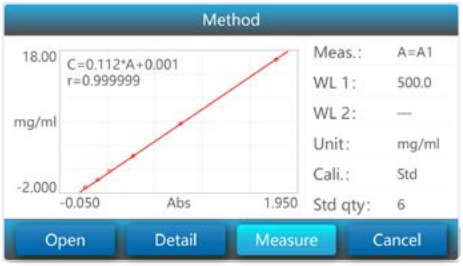
SPECTRO-V1/V2/V3V4, Single Beam VIS Spectrophotometers

SPECTRO-V Series Single Beam Vis Spectrophotometers are an easy to use instruments with advanced performance. With its stray light less than 0.05%T, it is highly accurate and reliable. It provides several basic functions, such as photometry test, quantitation test & spectrum scanning.

Features:

Fashion: ● Simple ● Elegant ● Aluminum Base
Anticorrosive Holder: ● Easy ● Accurate ● Anticorrosive
USB Interface: ● USB A: Printer ● USB B: Save data
Lamp Room: ● Lamp easy to change
Color Screen: ● Friendly interface Built-in Method.

1. Using the 1200 l / mm holographic grating with low stray light, the optimized optical path design ensures the high accuracy of the instrument;
2. The new wavelength driving mechanism has greatly improved the wavelength accuracy and repeatability, and effectively reduced the noisy;
3. All aluminum die casting base and all moulded shell, make the instrument more sturdy and durable;
4. High resolution TFT color LCD touch screen has excellent display effect and simple operation;
5. Self-calibration system while switching on and preheating countdown;
6. Support USB memory to upgrade firmware directly;
7. It can connect computers through USB, control instrument by software and can enrich and expand applications by software;
8. It also supports USB universal printer and serial micro printer based on PCL3 GUI protocol;
9. Wide sample room, suitable for 5~100 mm sample holder and other accessories;
10. Added Spectrum Scanning function, it's the first time in the same level instrument;
11. Automatic move wavelength to set position, automatic zero correction;
12. It can connect to the printer and output the measurement results directly.



Basic Function Instruction:

Photometry Test

- A / T one key conversion
- Results can be recorded, edited, deleted, saved and printed.

Quantitation Test

- Single and dual wavelength method (dual wavelength difference, dual wavelength ratio) to measure samples;
- 3 methods to establish standard curve (input equation coefficient, measure 2 ~ 10 standard samples or input standard sample absorbance and concentration)
- 3 kinds of fitting methods (linear zero, linear, two order)
- Standard curve can be saved and invoked
- Built-in 19 concentration units and custom input
- The measurement results can be recorded, edited, deleted, saved, and printed.

Spectrum Scanning

- The scanning speed is optional (low, medium, high);
- The scanning interval is optional (0.1, 0.2, 0.5, 1, 2, 5, 10nm);
- A / T display mode can be switched;
- Automatically find the peak;
- Point by point (peak) view;
- Coordinate adaptable and modifiable;
- Curves and data can be deleted, saved and printed.

File Management

- Files can be deleted, renamed, batch import / export, converted to .txt and .csv format.

System Utility

1. system calibration (dark current, wavelength, system baseline) ;
2. Light source management (light source switch, timing) ;
3. Clock management;
4. Memory management (storage status display, formatting) ;
5. Multi language (can be switched) ;

- Wavelength accuracy; Photometric precision;
- Hetero astigmatic light; Wavelength accuracy;
- Photometric precision; Hetero astigmatic light; Noise; Noise;

6. General settings (sound display sample rack and other settings).

Characteristics

1. Photometric measurement: one key switch A / T / E;
2. Quantitative measurement: establish standard curve;
3. Spectrum scanning: coordinate adaptive;
4. File management: data preservation, editable file name;
5. Performance verification: verifiable performance specifications;
6. System application: Multilingual operating system.

Performance Verification

- Wavelength Accuracy;
- Photometric Accuracy;
- Stray light;
- Noisy;
- Dark noisy;
- Stability;
- Spectral bandwidth.

Software Introduction (optional):

Easy UV 1.0 is an application software based on Windows operating system.

Software Function

1. Photometric measurement;
2. Quantitative measurement;
3. Kinetics measurement;
4. Multi wavelength measurement;
5. Spectrum scanning;
6. DNA / protein measurement.

Through the USB interface, the user can connect with the UV / Vis spectrophotometer very convenient.

At the same time, the application range, data analysis & file management function of instruments are greatly expanded, so that your analysis and measurement work becomes more relaxed and efficient.

Models		SPECTRO-V1	SPECTRO-V2	SPECTRO-V3	SPECTRO-V4
Optical System		Single Beam			
Light Source		Tungsten Lamp			
Detector		Silicon Photodiode			
Bandwidth		4mm	2mm	4mm	2mm
Wavelength	Range	320 – 1050nm		320 – 1100nm	
	Accuracy	±0.8nm		±0.5nm	
	Repeatability	≤0.4nm		≤0.2nm	
	Display	0.1nm			
	Gyration speed	10000nm/min			
	Scan speed	–		4200nm/min	
Photometric	Range	–0.301 – 3A, 0 – 200%T, 0 – 9999.9C			
	Accuracy	±0.003A @ 0.5A, ±0.006A @1A, ±0.5%T @ 0 – 100%T			
	Repeatability	±0.0015A @ 0.5A, ±0.003A @1A, ±0.2%T @ 0 – 100%T			
	Noisy	≤0.0005A @ 0A, ≤0.001A @ 1A, ≤0.002A @ 2A (500nm)			
	Stability	≤0.002A/hr (500nm, 2 hours after preheating)			
Stray Light		≤0.2%T		≤0.05%T	
Baseline		–		±0.002A	
Memory		236KB (Built-in), Unlimited (USB memory stick)			
Display		5 inches color screen (480x272)			
Keypad		Resistive touch screen			
Printer		Serial printer, USB printer (in line with HP PCL3 GUI printing language)			
Port		Serial port (printing), USB-A (storage and printing), USB-B (online)			
Holder	Standard	10mm 4-cell holder			
	Optional	10 – 50mm 4-cell holder,10 – 100mm 4-cell holder,10mm 8-cell Automatic Holder, 10 – 100mm 5-cell Automatic Holder, Micro Cell Holder, Peltier/Sipper System, Reflectance Accessories, Solid Sample Holder, Water-Jacked 1 or 4-cell holder, Test Tube Holder			
Function	Photometric	•	•	•	•
	Quantitation	•	•	•	•
	Spectrum			•	•
	File Management	•	•	•	•
	System Management	•	•	•	•
	Performance Verification	•	•	•	•
Language		6 languages (English, German, French, Spanish, Portuguese, simplified Chinese)			
Power		100 – 240V AC, 50/60Hz, 75W			
Dimensions		456(W)×360(D)×185(H)mm			
Weight		10.5kg			