



# UV-VISIBLE SPECTROMETER

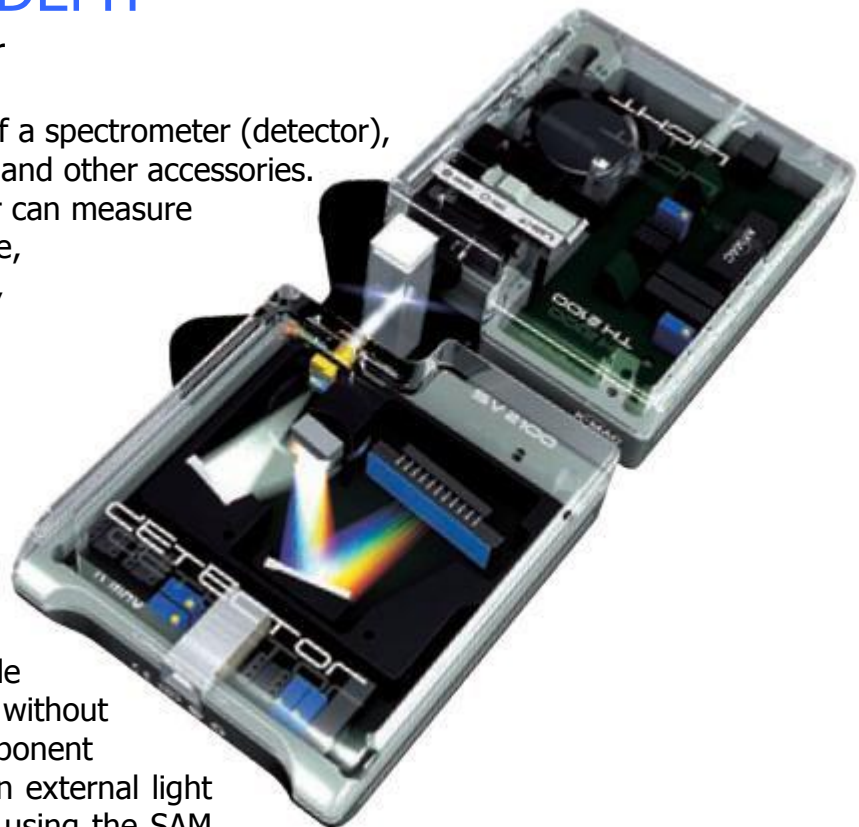
## SPECTRA ACADEMY

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# SPECTRA ACADEMY

## UV-Visible Spectrometer

Spectra Academy consists of a spectrometer (detector), light source, cuvette holder and other accessories. This miniature spectrometer can measure different modes (absorbance, transmittance, fluorescence, reflectance, irradiance) by switching the light source location. CCD array installed detector uses a Czerny Turner monochromator, and easily interfaces with a PC via USB. Lamp and lens unified light source makes it possible to conduct the experiments without any external additional component required. However, using an external light source is also a possibility, using the SAM connector for an external optical fiber.



3 modes in one system

All in one kit, for different experiments

Deuterium & tungsten light source combination

Compact & miniature module

For R&D and education in universities and research centres



Absorbance/Transmittance mode



Reflectance mode



Irradiance mode



Fluorescence mode

## APPLICATIONS

### Absorbance / Transmittance mode

- Absorbance & Transmittance intensity measurement
- Property transition monitoring according to concentration
- DNA / RNA ratio analysis
- Quantitative analysis
- Photoelectric chemistry measurement

### Reflectance mode

- Film thickness measurement
- Materials characterization
- Reflectometry



### Irradiance mode

Relative irradiance measurement  
LED analysis using integrated sphere  
Diverse light source measurement, using external optical fiber

### Fluorescence mode

Fluorescence measurement (biochemistry)  
Environmental material analysis (water, soil)  
Fluorescence spectrum measurement

(Additional light source needed for Fluorescence measurements)

## SOFTWARE

Signal intensity & appearance control by means of acquisition parameters : integration time, average, boxcar  
High-speed data acquisition: max 1ms for full spectrum (200 – 1000nm)

### Data Presentation

Scope mode (raw data display): intensity (counts)  
Absorbance:  $\log(I_0 / I)$   
Transmittance:  $\% (I / I_0) \%$   
Reflectance:  $\% (\text{Sample Reflect.} / \text{Ref. Reflect.}) \%$   
Irradiance  
Qualifications

### Time Series Acquisition

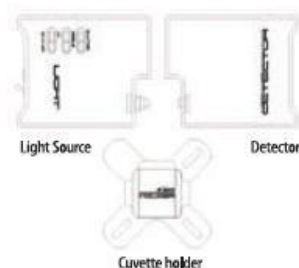
Intensity change monitoring at a wavelength for a certain period of time, up to 6 channels  
Apply to the analysis of chemicals

### Quantitative Analysis

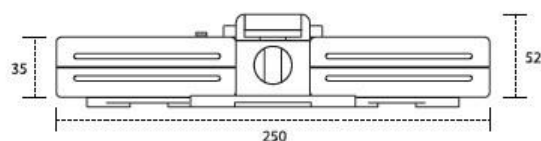
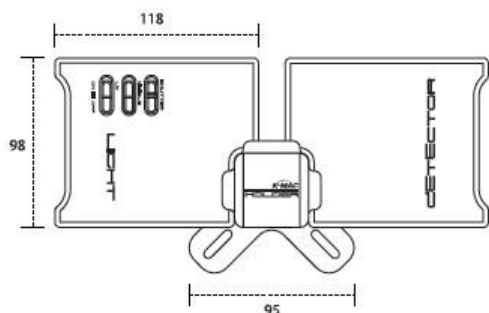
Concentration calculation using calibration curves  
Data presentation: lambda max.

## IN THE BOX

Item	Qty	Unit
Detector	1	EA
Light source	1	EA
Cuvette holder & cover	1	EA
Power supply	1	EA
USB cable	1	EA
Software CD	1	EA
Cuvette(Quartz 1, PS 1)	2	EA
Hex. Wrench	1	EA
Manual	1	EA
Plastic carrying box	1	EA



## SPECIFICATIONS & DIMENSIONS



Detector : 35 X 98 X 118mm

Light Source : 35 X 98 X 118mm

Cuvette Holder : 35 X 98 X 118mm

Box Case : 35 X 98 X 250mm

## CONTACT (EUROPE)

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