

KV-202 Bench Top Vacuum Ultraviolet Spectrophotometer



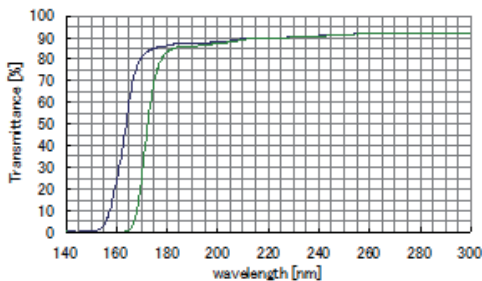
The KV-202 Bench top vacuum ultraviolet spectrophotometer has achieved compactness, high resolution and high stability compared to the conventional vacuum compatible type by using our original nitrogen purge type monochromator (KV-200). Light from a deuterium lamp that emits ultraviolet light is incident on a monochromator via a condensing system, is separated by a diffraction grating, and monochromatic light is extracted. The extracted monochromatic light is split into two light paths, one of which is detected as a monitor for compensating for changes in the light source, and the other is used for a semi-double beam method that irradiates the sample, enabling highly stable transmittance spectrum measurement. .

- Transmission measurement in the range of 120 to 300 nm (vacuum ultraviolet region)
- Nitrogen purge type monochromator enables high resolution and high stability
- Ideal for evaluation of special films and special substrates



Measurement data

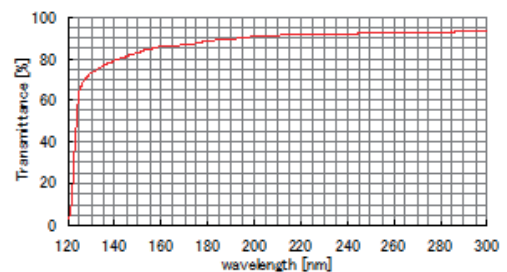
●T% data of thick synthetic quartz SiO₂●



Green 合成石英 (t=40mm)
 Blue 合成石英 (t=1mm)
 Green Synthetic quartz (t=40mm)
 Blue Synthetic quartz (t=1mm)

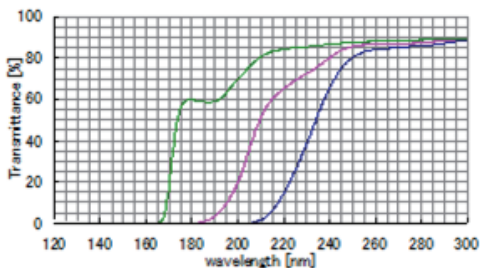
Synthetic quartz (SiO₂) with thickness of 1mm and 40mm was measured. The difference in transmittance due to the difference in thickness can be accurately measured by our unique optical system.

●T% of calcium fluoride (CaF₂)●



Calcium fluoride (CaF₂) used for evaluating optical crystals and resists was measured. The wavelength range for F₂ laser and ArF laser can be measured with good reproducibility.

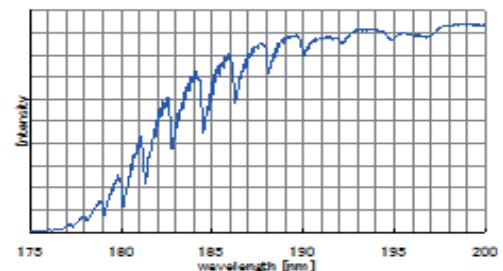
●T% of films for food packaging●



Green ポリエチレン
 Pink ポリ塩化ビニル
 Blue ポリ塩化ビニリデン
 Green Polyethylene
 Pink Polyvinyl chloride
 Blue Polychlorinated vinylidene

A film with a thickness of about 10μm was measured. Thin samples such as polymers can be easily measured. The system can measure continuously from the vacuum ultraviolet region to the ultraviolet region, which is difficult to measure with a general-purpose ultraviolet-visible spectrophotometer.

●High resolution measurement of air (O₂)●



Air was measured at 0.1 nm resolution. The fine structure in the Schumann-Runge absorption band of oxygen in the air has been clearly measured.



Specifications

Light source	Deuterium lamp 30W
Wavelength range	120 ~ 300nm
Measurement reproducibility	±0.3%T *1
Wavelength reproducibility	±0.1nm
Sample size	Minimum 3×3mm ~ Maximum 12×12mm
Sample thickness	Minimum 1mm ~ Maximum 3mm *2
Measurement method	Semi double beam
Detector	PMT with a salicylic acid soda window
Setting of display	Scale(Y axis, X axis), Trace(moving cursor)
	Overlay of the spectrum, Delete of spectrum display
Data processing	Smoothing, Arithmetic, 1st ~ 3rd Derivatives, Peak processing (Peak Find Peak Height, Peak Area, Data Dump)

*1 Under the following conditions: wavelength 120~300nm, Scanning speed 60nm/min, 100% flatness

*2 Specifications of the holder shape and sample numbers to be placed can be customized as option.

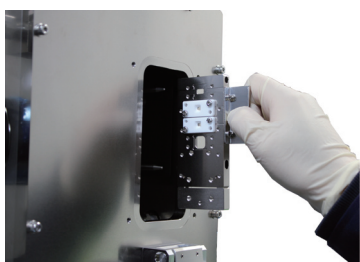


Standard configurations

- Deuterium lamp 30W
- Power supply for Deuterium lamp
- KV-200(nitrogen purge) monochromator
- Sample compartment (for nitrogen purge and vacuum)
- Transmission measurement sample holder
- PMT(photomultiplier tube) with a salicylic acid soda window
- Power supply for PMT
- Controller (wavelength drive, filter switching)
- Software (compatible with Windows 7)
- PC for controlling the system
- Instruction Manual

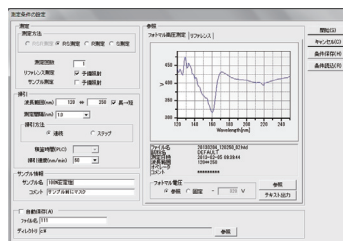


Transmission measurement sample holder

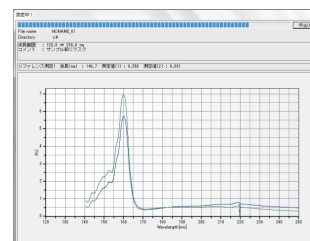


Software

Measurement conditions setting window



Measurement data window



Option

- Vacuum pump
- Various type of sample holders
- Various gratings
- Salicylic acid soda window



Dimensions

- Size : Approx. W800×D630×H500mm
- Weight : Approx. 70Kg

* excluding a controller and computer

● The specifications and appearance in this leaflet are subject to change without prior notice.

< KV202-1708028E >

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