



Photronics

UV-Vis Spectrophotometer Product Guide



*Technologically advanced UV-Vis Spectrophotometers
with unprecedented performance and flexibility.*

Why 400 Series UV-Vis?

S.I. Photonics UV-Vis Spectrophotometers are laboratory-grade instruments utilizing fiber optic sampling technology coupled with high sensitivity charge coupled device (CCD) array detection. This combination provides unprecedented performance and flexibility. The high sensitivity CCD array detector is ideal for low light level spectroscopy applications including diffuse reflectance and colorimetry. Instruments have dedicated tungsten and deuterium sources for high throughput covering the wavelength range from 190 nm – 980 nm with 1.1 nm bandwidth. For added flexibility, 400 Series instruments support external shutters and light sources for fluorescence and integrating sphere applications.

Unprecedented Performance

High sensitivity CCD array detection allows for faster analysis acquiring the full UV-Vis spectrum in the time it takes scanning instruments to obtain a single data point. While single beam instruments have traditionally been somewhat prone to drift, the Model 430 & 440 instruments incorporate electronic circuit feedback systems for monitoring lamp current, and the spectrograph are thermostat controlled providing unprecedented precision and stability necessary for longer term measurements.

Inspired Innovation

The wide range of available fiber optic sampling attachments make the instruments ideal for daily laboratory use and situations where sampling must be performed remotely as in glove boxes or fume hoods. Fiber optic sampling provides flexibility and ease of use including dip probes, cuvette holders, reflectance probes, flow through cells, and remote integrating spheres. Instruments and sampling accessories are designed for demanding laboratory applications.

Affordability

400 Series instruments are extremely affordable and include a full three-year warranty for trouble-free operation. The absence of moving parts provides consistent, reproducible analysis with performance approaching double-beam performance at a fraction of the cost

Specifications	Model 440	Model 430
Detector Type	3,648 pixel CCD	3,648 pixel CCD
Wavelength Range	190 nm – 980 nm	350 nm – 980 nm
Light Sources	Tungsten & Deuterium	Tungsten
Bandwidth	<1.1nm	<1.1 nm
Wavelength Accuracy	±0.5 nm	±0.5 nm
Photometric Accuracy	0.005 AU	0.005 AU
Photometric Range	0.0002 to 3.2 AU	0.0002 to 3.2 AU
Baseline Stability	<0.005 AU/hour	<0.005 AU/hour
Stray Light @ 340 nm	<0.002 AU	<0.002 AU
Sampling Accessories		
Fiber Optic	Yes	Yes
Dip Probe	Yes	Yes
Cuvette Holder	Yes	Yes
Reflectance Probe	Yes	Yes
Integrating Sphere	Yes	Yes
Measurement Modes		
Absorbance	Yes	Yes
% Transmittance	Yes	Yes
% Reflectance	Yes	Yes
Intensity	Yes	Yes
Emission	Yes	Yes
Colorimetry	Yes	Yes