

## **Model 430/440 CCD Array UV-Vis Spectrophotometers**

*Technologically advanced instruments offering  
unprecedented performance and flexibility.*

**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 within a single instrument.

### **High Sensitivity CCD**

The high sensitivity CCD array detector provides 100 times lower readout noise than photodiode array detectors commonly found in other multi-channel UV-Vis spectrophotometers. This increased sensitivity makes the Model 430 & 440 ideal for low light level spectroscopy applications including diffuse

reflectance and colorimetry.

### **Faster Analysis**

The array detector technology used in our 400 Series instruments acquire the full UV-Vis spectrum in the same time it takes scanning instruments to obtain a single data point.

### **Wavelength Range & Bandwidth**

Our Model 430 spans a wavelength range from 350 to 980 nm, while the Model 440 extends UV coverage from 190 to 980 nm. The spectral bandwidth is <1.1 nm across these ranges.

### **Greater Flexibility**

The functionality of the 400 Series instruments also supports external

light sources and shutters.

Accessories, such as a remote integrating sphere with an integrated tungsten source, easily connect thereby removing the need for separate power supplies.

The use of external shutters allows the automatic collection of dark signal measurements necessary for accurate radiometry applications.

### **Intelligence**

The Model 430 & 440 instruments incorporate electronic systems for monitoring lamp condition and run time, and calibration data.

## Model 430 and 440 Specifications

### Performance

### Model 430

### Model 440

Wavelength Range	350 nm – 980 nm	190 nm – 980 nm
Spectral Bandwidth	<1.1 nm	<1.1 nm
Wavelength Accuracy	± 1.0 nm	± 1.0 nm
Photometric Range	0.002 – 3.20 AU	0.002 – 3.20 AU
Photometric Accuracy	0.005 AU	0.005 AU
Baseline Stability	<0.005 AU/hour	<0.005 AU/hour
Stray Light	<0.02%	<0.02%

### General

Size	9"x13"x5.5"	9"x13"x5.5"
Weight	12 pounds	15 pounds
Power	110/220 VAC, 0.3A	110/220 VAC, 0.8A