

Integrating Sphere Reflectance



Remote reflectance measurements for solid surface color and spectral analysis

Hardware

The 400 Series fiber optic remote integrating spheres provides diffuse, uniform illumination for reflectance measurement of samples with varying gloss and texture. The use of fiber optic coupling

allows for measurements on large panels that are otherwise impossible to measure with traditional bench-top color measuring instruments.

This also allows for quick and easy conversion of the

instrument for use as a laboratory grade UV-Vis spectrophotometer for added versatility.

Spheres allow for specular and diffuse sample measurements over the wavelength range of 350 nm – 980 nm.

Software

The colorimetry software for the Series 400 Spectrophotometer provides a full range of colorimetry calculations in an intuitive Windows® based application.

Calculated color values for Tristimulus, CIE Chromaticity, CIELAB, CIELUV, Hunter Lab as well as industry unique scales are available.

The standard laboratory instrument software can also be used with reflectance integrating spheres for transmission and absorption measurements from 350nm - 980nm, which are out of the colorimetry range.

Configuration

The 4-inch diameter sphere has 4 ports; lamp, fiber, reference and sample. The smaller ½" port is for the lamp.

The port opposite the lamp can be used as a reference port to improve sampling accuracy.

The sample port is 90° from the lamp port and has a baffle to prevent the light from the lamp directly illuminating the sample.

The collecting fiber port is 180° from the sample port. For accurate, low noise measurements, the collection fiber utilizes an external shutter providing for automatic blanking and dark current correction.

