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ARCspectro VIS-NIR DR

Spectrophotometer for diffuse reflectance measurement in VIS & NIR (360-2500nm)



The ARCSpectro VIS-NIR is a laboratory spectrometer designed for the **measurement of diffuse reflectance** of solid samples over the **complete VIS & NIR** spectral range.

The system includes an **integrating sphere** for diffuse reflectance measurement on samples. **Accurate** results are obtained in only **5 seconds**. Ideal for paints, textiles, or raw material reflectivity characterization.

This instrument is ideal for measuring the **Total Solar Reflectance (TSR)** value. This parameter is calculated automatically by the included software.

■ Applications

- VIS-NIR diffuse reflectance measurement on paints, textiles, dyes, ink, cosmetics or plastics
- Measurement of Total Solar Reflectance (TSR value) in accordance to ASTM® norms G173 and E903

• Characteristics

- Large spectral range: 360nm-2500nm with high optical resolution (5 nm)
- Fast (5 seconds measurement) and easy to use (no user parameters)
- Accurate measurement: integrating sphere with 10mm-diameter measurement port
- Automatic calculation of the Total Solar Reflectance value

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■ Features

Two spectrometers in one

The system incorporates two spectrometers: one Arcoptix FT-NIR Fourier-Transform scanning spectrometer for NIR region (900-2500nm) and one multichannel grating spectrometer for the VIS region (360-1050nm). The software automatically connects the spectra from the 2 spectrometers, so you do not have to care about this.

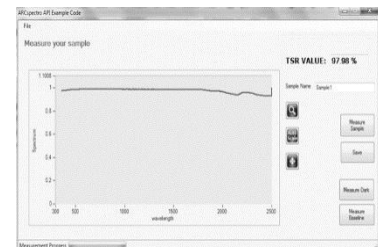
Integrating sphere

The 50mm ID Integration sphere with internal halogen lamp is an ideal diffusing light source. It produces a homogeneous and bright illumination all over the 10mm-diameter measurement port. Light reflected from the sample is collected under a standard 8° viewing angle.

Total Solar Reflectance

The easy-to-use software interface for Windows XP, 7 and 8 is included.

In addition to allowing for instrument control and display of reflection spectra, the software automatically calculates the Total Solar Reflectance (TSR) value.



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■ Technical specifications

Spectral range	360 – 2500 nm
Spectral resolution	5 nm (optical) 1nm reporting interval
Measurement geometry	Diffuse illumination and 8° viewing
Integrating sphere diameter	50 mm
Measurement port diameter	10 mm
Illumination source	Halogen, 5W
Measurement time	<5s
SNR (Full dynamic range- single measurement, broadband diode)	>1'000:1
Inter-instrument Agreement	±1% at 50% R
Read Repeatability On White Ref	Less than 0.2% variation at 50% R
Inter-instrument Agreement for Reflectance (CIELAB)	Better than 0.2
Software Interface	Windows XP / 7 / 8
Operating power	5V / 4A (line power adaptor is included)
Communication Interface	USB
Product Dimensions (including electronics)	38mm x 25cm x 32cm
Product Weight	8 Kg
Operating Temperature	10°C – 40°C

■ Ordering Information

ARCspectro VIS-NIR DR	VIS-NIR-DR
Replacement bulb	QTH-12-05