

## DATASHEET

# 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.

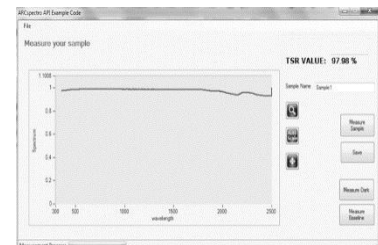
#### Integrating sphere

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

<b>Spectral range</b>	360 – 2500 nm
<b>Spectral resolution</b>	5 nm (optical) 1nm reporting interval
<b>Measurement geometry</b>	Diffuse illumination and 8° viewing
<b>Integrating sphere diameter</b>	50 mm
<b>Measurement port diameter</b>	10 mm
<b>Illumination source</b>	Halogen, 5W
<b>Measurement time</b>	<5s
<b>SNR (Full dynamic range- single measurement, broadband diode)</b>	>1'000:1
<b>Inter-instrument Agreement</b>	±1% at 50% R
<b>Read Repeatability On White Ref</b>	Less than 0.2% variation at 50% R
<b>Inter-instrument Agreement for Reflectance (CIELAB)</b>	Better than 0.2
<b>Software Interface</b>	Windows XP / 7 / 8
<b>Operating power</b>	12V / 20W (line power adaptor is included)
<b>Communication Interface</b>	USB
<b>Product Dimensions (including electronics)</b>	38mm x 25cm x 32cm
<b>Product Weight</b>	8 Kg
<b>Operating Temperature</b>	10°C – 40°C

### Ordering Information

<b>ARCspectro VIS-NIR DR</b>	VIS-NIR-DR
<b>Replacement bulb</b>	QTH-12-05