

RSA-REF-50-DB Dual Beam Reflectance Spectroscopy Accessory

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The RSA-REF-50-DB Integrating Sphere provides even surface illumination for reflectance measurements of surfaces such as the color of flat samples.

The RSA-REF-50-DB has 10.32 mm (0.41 in) sample port aperture, a transfer optic assembly for restricting the viewing angle and a built-in tungsten-halogen light source with 12-volt DC adapter. The sphere is made from Labsphere's Spectralon® diffuse reflectance material which provides a highly Lambertian reflecting surface. A simple switch allows users to manipulate the sphere for the inclusion (I) or exclusion (E) of specular reflectance. The reflectivity value, obtained by calculating the difference between the inclusion and exclusion of specular reflection, is a direct measurement of the gloss of the surface.

The RSA-REF-50-DB has two primary functions:

1. To provide diffuse illumination for reflectance measurements, such as determining the color of flat surfaces; and
2. To collect reflected light through an optical fiber port for spectral reflectance characterization.

The RSA-REF-50-DB is small and compact yet durable enough for use outside the laboratory. All instrument electronics – including the lamp, which can be replaced by simply removing two screws mounted on the bottom section of the unit.



Features:

- **Versatile** – adjusts for diffuse or diffuse plus specular measurements
- **High reflectivity** – Spectralon material is >98% reflective from 400 - 1500 nm
- **Built-in light source** – provides diffuse surface illumination for 8° reflectance collection

Applications:

- Measure spectral reflectance
- Specular or diffuse samples
- Measure color
- Reflectance system design
- Measure VIS/NIR reflectance properties

Ordering Information and Specifications

Model Number:	RSA-REF-50-DB
Order Number:	AS-03252-000
Sample Port Diameter:	10.32 mm
Spectral Range:	~360 - 2500 nm
Sphere Coating:	Spectralon
Sphere Diameter:	38.1 mm
Bulb Color Temperature:	3100 K
Bulb Life:	900 hours
Connector:	SMA 905
PTFE Reflectivity:	>98% (400 - 1500 nm) >95% (250 - 2000 nm)
Replacement Bulb:	OC-03137-000
Dimensions:	2.16 in (5.5 cm) x 2.25 in (5.7 cm) x 3.26 (8.3 cm) (LWH)
Weight:	0.8647 kg