



Reflectance Standards

FEATURES

- High Reflectance
- Durable, Cleanable
- NIST Traceable Calibration

APPLICATIONS

- Calibration of
 - Sphere Systems
 - Photometers
 - Radiometers
 - Densitometers
 - Optical Equipment
 - Spectrophotometers
- Test Linearity of
 - Detector Systems
 - Colorimeters
 - Densitometers
 - Spectrophotometers

Reflectance Standards are made from our proprietary Zenith. This highly reflecting, PTFE-based material is resistant to exposure to high levels of radiation, making it ideal for use in standards and calibration targets.

Reflectance standards are generally used to determine the linearity of instruments used in colorimeters, spectrophotometers and radiometers. A diffuse 99% standard is used industry-wide for calibration of colorimeters, optical equipment, and spectrophotometers.

Standards are available uncalibrated, or calibrated. Calibrations cover the UV/VIS, UV/VIS/NIR or NIR wavelength regions with calibration data in 20 or 50 nm increments. Data is provided in print and electronic formats. Custom calibrations are available. Please see our ordering information for specifics on our calibrations.

SphereOptics maintains calibration laboratories in the United States and Germany with standards traceable to both the National Institute of Standards and Technology (NIST) and Physikalisch Technische Bundesanstalt (PTB).

Ordering information

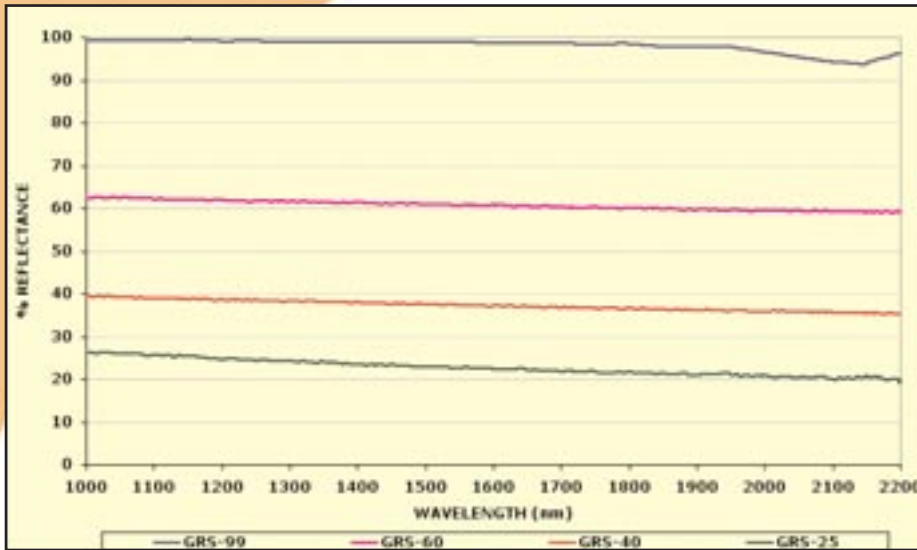
Standards are available in 2 inch (50 mm) and 1.25 inch (30 mm) diameters with reflectance values ranging from our high reflectance 99% to a 25% gray scale. Reflectance values include 99%, 70%, 65%, 50%, 40%, 30% and 25%. Standards are sold individually or in sets of two or four standards with varying reflectances. Each standard is packaged in a durable cup style holder with a protective cover.

OEM and Custom Standards

We welcome the opportunity to quote on custom and OEM reflectance standards. Please contact our sales engineering department for capabilities information.



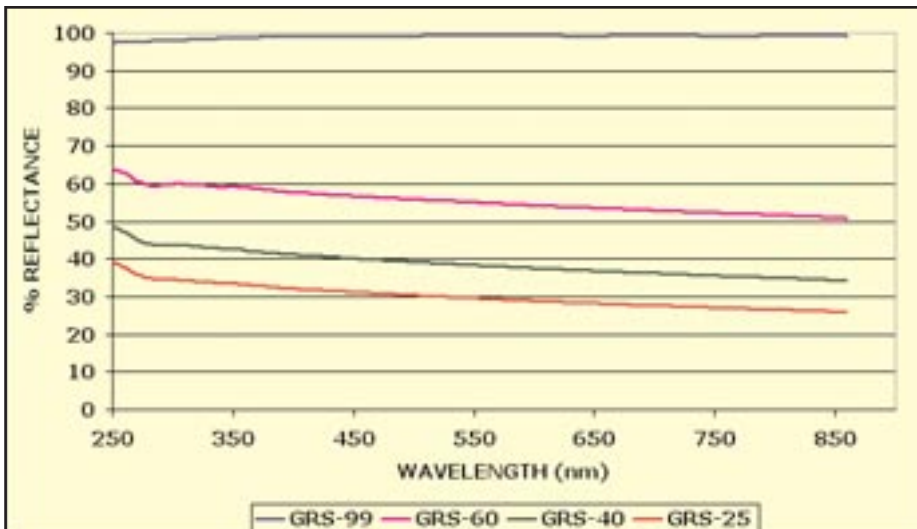
TYPICAL REFLECTANCE



TYPICAL REFLECTANCE GRAY SCALE STANDARDS SET

Available with reflectance values of 99, 60, 40 and 25%

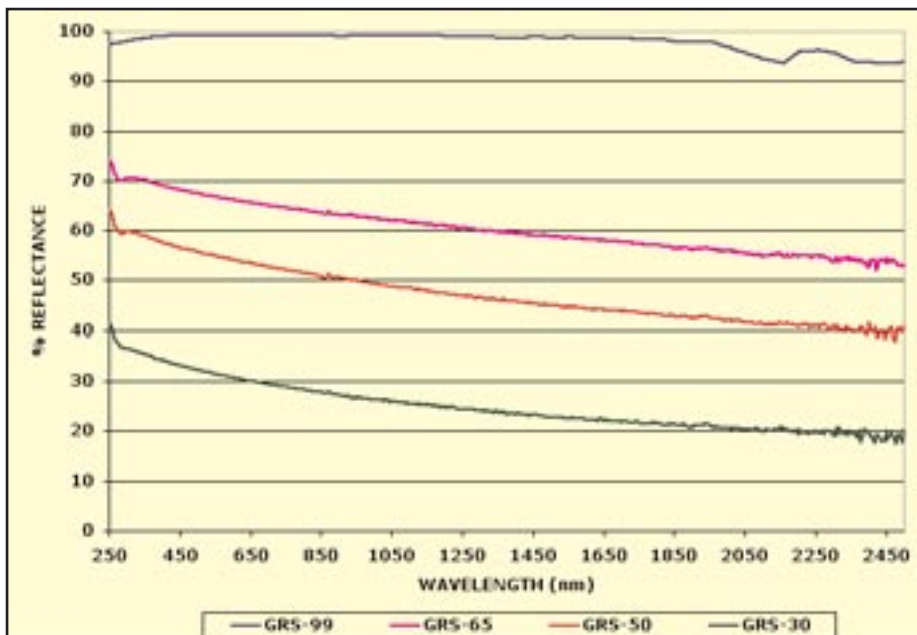
Calibrated from 1000 to 2200 nm with calibration data provided in 20 nm steps



TYPICAL REFLECTANCE UV/VIS GRAY SCALE STANDARDS SET

Available with reflectance values of 99, 65, 50 and 30%

Calibrated from 250 to 850 nm with calibration data provided in 20 nm steps.



TYPICAL REFLECTANCE UV/VIS-NIR GRAY SCALE STANDARDS SET

Available with reflectance values of 99, 75, 50 and 25%

Calibrated 250 to 2500 nm with calibration data provided in 50 nm steps.

Other reflectivities are available upon request.

ORDERING INFORMATION - STANDARDS SETS

| Order Number | Wavelength Range | Diameter | Number of Standards | Reflectance Values |
|--------------|------------------|-----------------|---------------------|--------------------|
| SG 3086 | 250 to 2500 nm | 2 in (50 mm) | Two (2) | 99, 50% |
| SG 3087 | 250 to 2500 nm | 1.25 in (30 mm) | Two (2) | 99, 50% |
| SG 3088 | 250 to 2500 nm | 2 in (50 mm) | Four (4) | 99, 70, 50, 25% |
| SG 3089 | 250 to 2500 nm | 1.25 in (30 mm) | Four (4) | 99, 70, 50, 25% |
| SG 3090 | 250 to 860 nm | 2 in (50 mm) | Two (2) | 99, 50% |
| SG 3091 | 250 to 860 nm | 1.25 in (30 mm) | Two (2) | 99, 50% |
| SG 3092 | 250 to 860 nm | 2 in (50 mm) | Four (4) | 99, 65, 50, 30% |
| SG 3093 | 250 to 860 nm | 1.25 in (30 mm) | Four (4) | 99, 65, 50, 30% |
| SG 3094 | 1000 to 2200 nm | 2 in (50 mm) | Two (2) | 99, 40% |
| SG 3095 | 1000 to 2200 nm | 1.25 in (30 mm) | Two (2) | 99, 40% |
| SG 3096 | 1000 to 2200 nm | 2 in (50 mm) | Four (4) | 99, 60, 40, 25% |
| SG 3097 | 1000 to 2200 nm | 1.25 in (30 mm) | Four (4) | 99, 60, 40, 25% |

ORDERING INFORMATION - INDIVIDUAL STANDARDS

| Order Number | Wavelength Range | Diameter | Reflectance Value |
|--------------|------------------|-----------------|-------------------|
| SG 3051 | 250 to 2500 nm | 2 in (50 mm) | 99% |
| SG 3052 | 250 to 2500 nm | 1.25 in (30 mm) | 99% |
| SG 3069 | 250 to 2500 nm | 2 in (50 mm) | 70% |
| SG 3070 | 250 to 2500 nm | 1.25 in (30 mm) | 70% |
| SG 3071 | 250 to 2500 nm | 2 in (50 mm) | 50% |
| SG 3072 | 250 to 2500 nm | 1.25 in (30 mm) | 50% |
| SG 3073 | 250 to 2500 nm | 2 in (50 mm) | 25% |
| SG 3074 | 250 to 2500 nm | 1.25 in (30 mm) | 25% |
| SG 3053 | 250 to 860 nm | 2 in (50 mm) | 99% |
| SG 3054 | 250 to 860 nm | 1.25 in (30 mm) | 99% |
| SG 3055 | 250 to 860 nm | 2 in (50 mm) | 65% |
| SG 3056 | 250 to 860 nm | 1.25 in (30 mm) | 65% |
| SG 3057 | 250 to 860 nm | 2 in (50 mm) | 50% |
| SG 3058 | 250 to 860 nm | 1.25 in (30 mm) | 50% |
| SG 3059 | 250 to 860 nm | 2 in (50 mm) | 30% |
| SG 3060 | 250 to 860 nm | 1.25 in (30 mm) | 30% |
| SG 3061 | 1000 to 2200 nm | 2 in (50 mm) | 99% |
| SG 3062 | 1000 to 2200 nm | 1.25 in (30 mm) | 99% |
| SG 3063 | 1000 to 2200 nm | 2 in (50 mm) | 60% |
| SG 3064 | 1000 to 2200 nm | 1.25 in (30 mm) | 60% |
| SG 3065 | 1000 to 2200 nm | 2 in (50 mm) | 40% |
| SG 3066 | 1000 to 2200 nm | 1.25 in (30 mm) | 40% |
| SG 3067 | 1000 to 2200 nm | 2 in (50 mm) | 25% |
| SG 3068 | 1000 to 2200 nm | 1.25 in (30 mm) | 25% |

CALIBRATION

- UV-VIS Calibrations are from 250 nm to 850 nm with calibration data provided in 20 nm steps.
- UV-VIS-NIR Calibrations are from 250 to 2500 nm with calibration data provided in 50 nm steps.
- NIR Calibrations are from 1000 to 2200 nm with calibration data provided in 20 nm steps.

SphereOptics also offers recalibration services that are traceable to national laboratory standards.



www.sphereoptics.com

USA

SphereOptics, LLC
Tel: 603-746-2000 • US Sales 858-695-2895
Fax: 603-746-3007
Email: sales@sphereoptics.com

GERMANY

SphereOptics GmbH
Tel: +49 (0) 7556 929 9666
Fax: +49 (0) 7556 50108
Email: infode@sphereoptics.com

FRANCE

SphereOptics SARL
Tel: +33 (0) 1 69 07 21 84
Fax: +33 (0) 1 69 07 71 38
Email: infofr@sphereoptics.com