



Zenith Lite™ Targets

DIFFUSE REFLECTANCE, HIGH DURABILITY, LIGHTWEIGHT

Diffuse reflectance targets are widely used in optical laboratories, in remote sensing and other field applications involving optical measurements. So far, larger targets (sizes bigger than 500 x 500 mm) have been made by applying a BaSO₄-based white paint onto a surface. Limitation of that method is, that the surface has to be recoated on a regular basis, depending on the lab or the environmental conditions, the advantage is the initial cost of the painted target.

Competitive reflectance targets show excellent reflectance properties, however they tend to be heavy, brittle and expensive because they are made as a whole piece from the sintered PTFE.

With **Zenith Lite™** reflectance targets we apply a new technique laminating a Zenith Polymer® diffuser onto a lightweight matrix sandwich. The reflectance properties and ruggedness remain at the same high level as other polymer based targets, but they have significant advantages in weight and cost.

THE NEW STANDARD

The **Zenith Lite™** targets are built from a 1 mm or 2 mm **Zenith Polymer®** diffuser attached to a 10-15mm thick aluminium honeycomb structured plate by a special PTFE high performance glue. The laminating technique allows multiple reflectivities on one target with no visible seams (max. width 1040 mm). Targets can be made to any size and combination of white and grey scale reflectivities. The unique backing can be drilled for easy attachment to other mounting devices.

Zenith Lite™ targets are quickly becoming the new standard in reflectance targets. Featuring lower weight (< 1 kg for a 20 x 20 cm target), flexible custom adaptation and multi-reflectivities on one surface, **Zenith Lite™** targets are a great alternative to the heavy, hard-to-handle conventional targets available today.

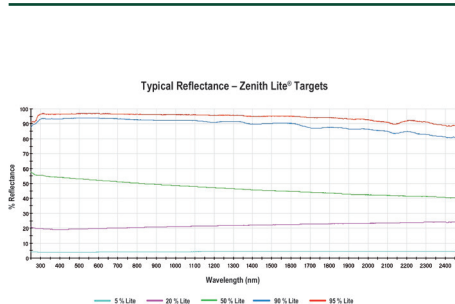
APPLICATIONS

- Field calibration of portable spectrometers (Remote Sensing)
- Contrast measurements for camera applications
- Homogeneous projector walls for inspection and quality check of whole projectors and projector lamps
- Presentation screens
- „Environment laser targets“
- „Environment test targets“
- Light source characteristics and patterns
- Reflectance standard for illumination measurements and calibrations
- Adjustment of built-in measurement devices in planes, helicopters and military vehicles of all kinds

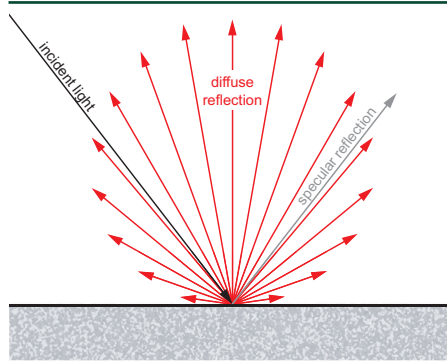


OPTICAL PROPERTIES

- Lambertian reflectance of 95, 90, 50, 20 and 5 %
- Constant reflection over the wavelength range of 250 nm to 2450 nm
- Reflection tolerances of +/- 3 % from Batch to Batch
- Certified calibration on a Perkin Elmer Lambda 19, NIST traceable
- Homogeneity over the surface of +/- 1 % R
- Stability of the material up to 8 J/cm² (Laser applications)



Lambertian reflectance in percent by a constant reflection over the wavelength range from 250-2450 nm.



Nearly ideal diffuse, lambertian reflectance within the range of 250 to 2450 nm.

CHEMICAL AND MECHANICAL PROPERTIES

- Nonpolar, therefore water repellent
- Pure material insulator
- Working temperature range of - 5 to + 65 °C
- Humidity range of 10 to 90 %
- Weight < 9 kg/m²



Lightweight and rugged for lab and field applications.

ZENITH LITE™ TARGETS

Lightweight, diffuse reflectance targets – calibrated¹ over the UV/Vis/NIR range

Order-No. calibrated	Order-No. uncalibrated	Reflectivity	Dimensions
SG 3151	SG 3151-U	≈ 95 %	200 x 200 x 12 mm (approx. 8 x 8 inch)
SG 3152	SG 3152-U	≈ 90 %	200 x 200 x 11 mm (approx. 8 x 8 inch)
SG 3153	SG 3153-U	≈ 50 %	200 x 200 x 11 mm (approx. 8 x 8 inch)
SG 3154	SG 3154-U	≈ 20 %	200 x 200 x 11 mm (approx. 8 x 8 inch)
SG 3155	SG 3155-U	≈ 5 %	200 x 200 x 11 mm (approx. 8 x 8 inch)
SG 3156	SG 3156-U	≈ 95 %	500 x 500 x 12 mm (approx. 20 x 20 inch)
SG 3157	SG 3157-U	≈ 90 %	500 x 500 x 11 mm (approx. 20 x 20 inch)
SG 3158	SG 3158-U	≈ 50 %	500 x 500 x 11 mm (approx. 20 x 20 inch)
SG 3159	SG 3159-U	≈ 20 %	500 x 500 x 11 mm (approx. 20 x 20 inch)
SG 3160	SG 3160-U	≈ 5 %	500 x 500 x 11 mm (approx. 20 x 20 inch)
SG 3161	SG 3161-U	≈ 95 %	1000 x 1000 x 12 mm (approx. 40 x 40 inch)
SG 3162	SG 3162-U	≈ 90 %	1000 x 1000 x 11 mm (approx. 40 x 40 inch)
SG 3163	SG 3163-U	≈ 50 %	1000 x 1000 x 11 mm (approx. 40 x 40 inch)
SG 3164	SG 3164-U	≈ 20 %	1000 x 1000 x 11 mm (approx. 40 x 40 inch)
SG 3165	SG 3165-U	≈ 5 %	1000 x 1000 x 11 mm (approx. 40 x 40 inch)

¹ Calibration will be performed on a Perkin Elmer Lambda 19, data will be supplied electronically in 1 nm steps, 50 nm step printed documentation with NIST/PTB traceability with certificate for the 250-2450 nm range.

DELIVERY TERMS

- Delivery time for 200 x 200 mm targets within 2-5 days
- Delivery time for 500 x 500 mm and 1000 x 1000 mm targets approx. 4 weeks
- 200 x 200 mm Zenith Lite™ Targets will have M4 mounting hole on the backside
- 500 x 500 mm and 1000 x 1000 mm Zenith Lite™ Targets will have two textile handles on the back
- 500 x 500 mm and 1000 x 1000 mm Zenith Lite™ Targets will be delivered with a 100 x 100 mm reference target for recalibration purposes
- All targets are delivered in solid, light weighted boxes
- Custom sizes and reflectivities upon request

For further information and questions to our products please contact us directly.



... your Partner in Lighting Technology!

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