Labsphere

Spectrablack

Low reflectance light absorbing materials and targets

Excellent light absorption
Characterizing the performance of Lidar and Time of Flight (ToF) sensing systems at low reflectance (<5%) has proved difficult due to a lack of spectrally flat optical reflectance materials. Labsphere's Spectrablack targets and materials solve this problem.

Spectrablack is a low reflectance, light absorbing material that is resistant to abrasion. The material is continuously microporous resulting in unparalleled light absorption.

Typical Reflectance*
250 – 380 nm: 1.5%
380 – 780 nm: 1.0%
780 – 2500 nm: 1.1%

*Reflectance values may vary.
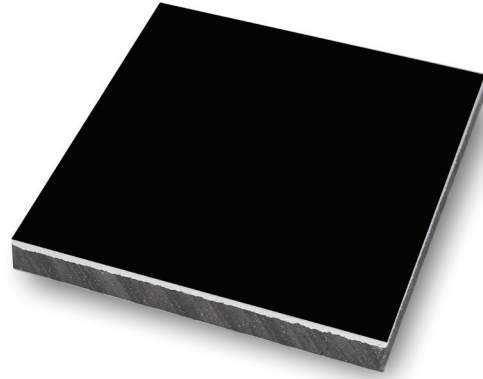
Features:

• Typical spectral reflectance 1.6% or less from 250 - 2500 nm

• Abrasion resistant, easy to use, and easy to clean

• Maximum use temperature is 80°C

Applications:

• ToF and LIDAR low reflectance range testing

• Light shielding/absorbing: utilizes the light absorbing effect of the micro porous surface
  - Optical scattering prevention in optical systems, optical measuring instruments, cameras, etc.
  - Spectrometer and spectrophotometer stray light reduction
  - Non-reflective sheeting and general light shielding material

• Ideal for indoor, near normal, sensor characterization

## Typical 8/H Reflectance Factors of Spectrablack
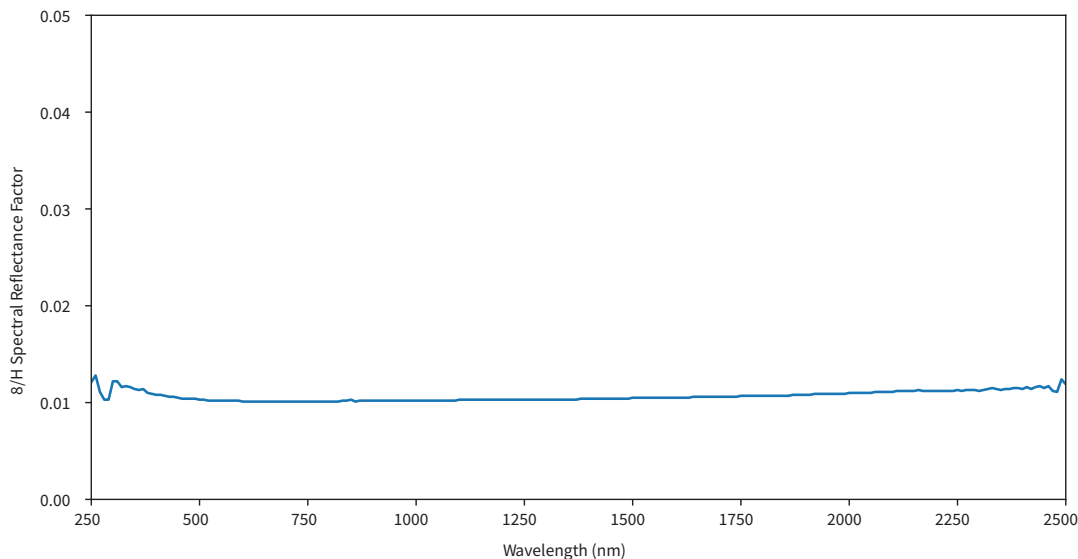
Results you can trust

All Spectrablack targets include a calibration. Choose the calibration package that's right for your application.

1. Spectrablack Commercial and Rigid Targets include a calibration report of the average spectral reflectance from 350 to 2400 nm and a 905 nm nine point reflectance map. The average reflectance is calculated from nine individual measurements collected in a grid across the target surface. Your target will ship with a calibration certificate, uniformity map, and a calibration data file on USB.

2. Spectrablack Lidar Targets include a calibration report of the average spectral reflectance at 850 nm, 905 nm and 1550 nm. The average reflectance values are calculated from nine individual measurements collected in a grid across the target surface. All Lidar Targets include 850 nm, 905 nm and 1550 nm reflectance uniformity maps. Your target will ship with a calibration certificate, uniformity maps, and pdf files on USB.
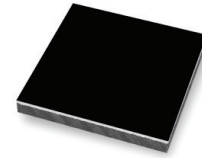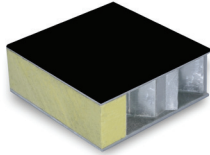
Example of Commercial and Lidar Target with Mounting
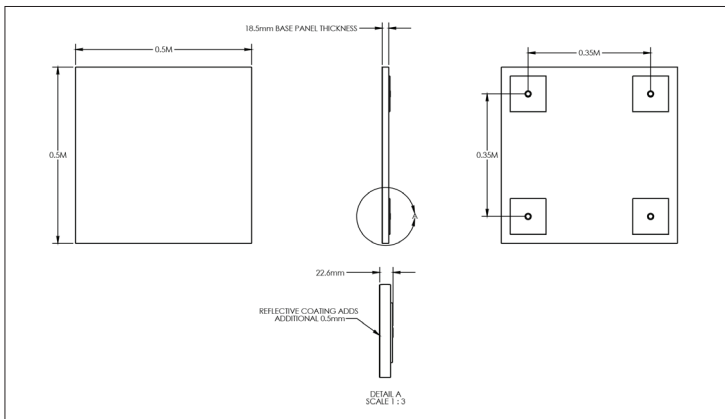
Example of Rigid Target
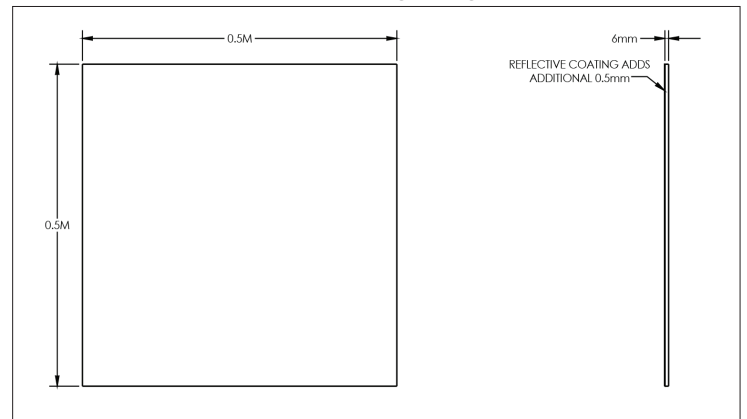
Approximate Target Weight and Thickness

Size	Weight	Thickness
0.5 m x 0.5 m	2.0 kg	18.5 mm

Approximate Target Weight and Thickness

Size	Weight	Thickness
0.5 m x 0.5 m	2.0 kg	6 mm

Ordering Information

Model Number	Description	Order Number
SBT-05M-CT-TM	Spectrablack, Commercial Target, 0.5 m x 0.5 m, 18.5 mm thick, Honeycomb Al backing, with mounting, no calibration	AA-01600-001
SBT-05M-CT-TMCM	Spectrablack, Commercial Target, 0.5 m x 0.5 m, 18.5 mm thick, Honeycomb Al backing, with mounting, nine point uniformity map reported at 905 nm and a report of the average reflectance from 350 to 2400 nm derived from the nine points used for mapping	AA-01601-001
SBT-05M-LT-TMCM	Spectrablack, Lidar Target. 0.5 m x 0.5 m, 18.5 mm thick, Honeycomb Al backing, with mounting, nine point mappings and calibrations at 850, 905, and 1550 nm	AA-01601-005
SBT-05M-RT-T	Spectrablack, Rigid Target, 0.5 m x 0.5 m, 6mm thick light Al backing, no mounting, no calibration	AA-01600-003
SBT-05M-RT-TCM	Spectrablack, Rigid Target. 0.5 m x 0.5 m, 6 mm thick, light Al backing, no mounting, nine point uniformity map reported at 905 nm, and a report of the average reflectance from 350 to 2400 nm derived from the nine points used for mapping	AA-01601-003

Custom size options are available. Please contact our Technical Sales Team to discuss.

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