

Diflex™ Broadband Dielectric Mirrors

All-Purpose Solution for High Reflectivity Mirrors

Materion Balzers Optics provides the best choice of broadband high reflectivity mirrors. Diflex™ mirrors are characterized by extreme reflectivity, low scattering and a wide acceptance range for the angle of incidence. The consistent and high reflectivity for any polarization covers the wavelength range between 320 nm to 2000 nm. Diflex™ mirror coatings are composed of metall-oxide layers. They withstand harsh environmental conditions and can be cleaned repeatedly.



Benefits

- Consistent and high reflectivity over the full VIS and NIR spectral range
- $R > 99\%$ for wide range of angle of incidence
- Long-term shift-free spectral performance
- High environmental stability
- Wide flexibility in filter size

Applications

- High-performance low-loss optical systems
- Laser optics
- Biophotonics

Technical Data

Wavelength

Diflex™ 1100 for 350 – 1100 nm

Diflex™ 2000 for 320 – 2000 nm
(customized versions on request)

Reflectance

$>99\%$ for any polarization

Flatness

$\lambda/2$

Angle of Incidence

Standard $0^\circ - 45^\circ$, (different AOI on request)

Surface defect

5 / 1 x 0.16

Substrate

Fused silica or BK7

Dimensions

Standard size $\varnothing 25$ mm,

Thickness 6 mm

Other dimensions on request

Parallelism

< 5 arcmin

Environmental Stability

Temperature $-40 \dots +150^\circ\text{C}$

Humidity up to 99 %

Diflex™ Broadband Dielectric Mirror 350 – 1100 nm

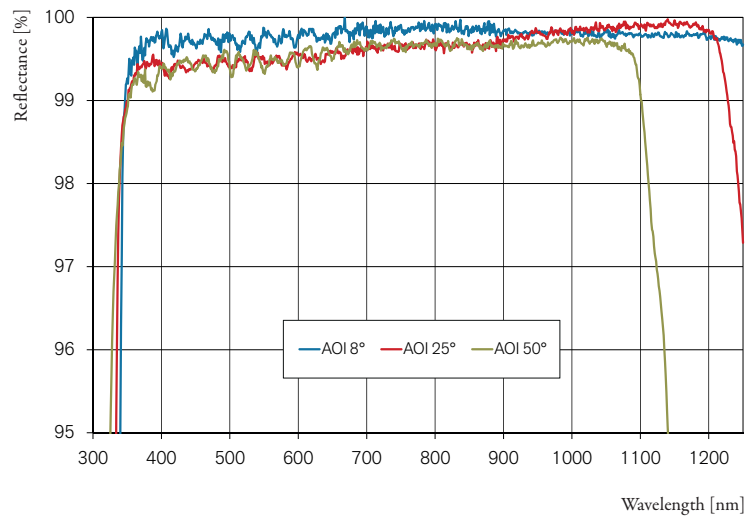


Fig.1: Measured spectral reflectance of unipolarized light, AOI 8°, 25°, 50°

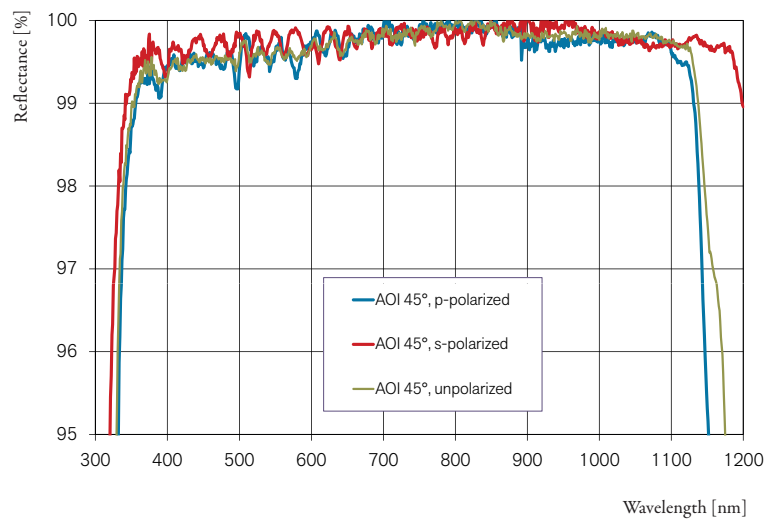


Fig.2: Measured spectral reflectance of p-, s- and unipolarized light, AOI 45°

Diflex™ Broadband Dielectric Mirror 320 – 2000 nm

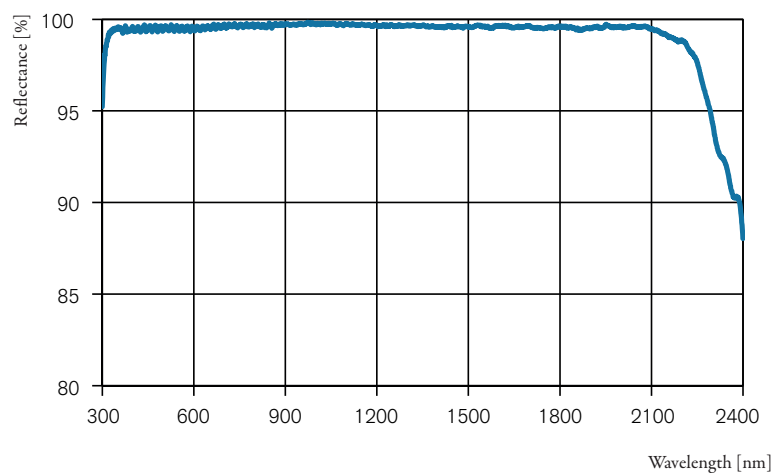


Fig.3: Measured spectral reflectance, AOI 8°