MATERION
// BALZERS OPTICS

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
λ/2

Angle of Incidence
Standard 0° – 45°, (different AOI on request)

Surface defect
5 / 1 x 0.16

Substrate
Fused silica or BK7

Dimensions
Standard size Ø 25 mm,
Thickness 6 mm
Other dimensions on request

Parallelism
< 5 arcmin

Environmental Stability
Temperature – 40 ... + 150° C
Humidity up to 99 %

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Diflex™ Broadband Dielectric Mirror 350 – 1100 nm

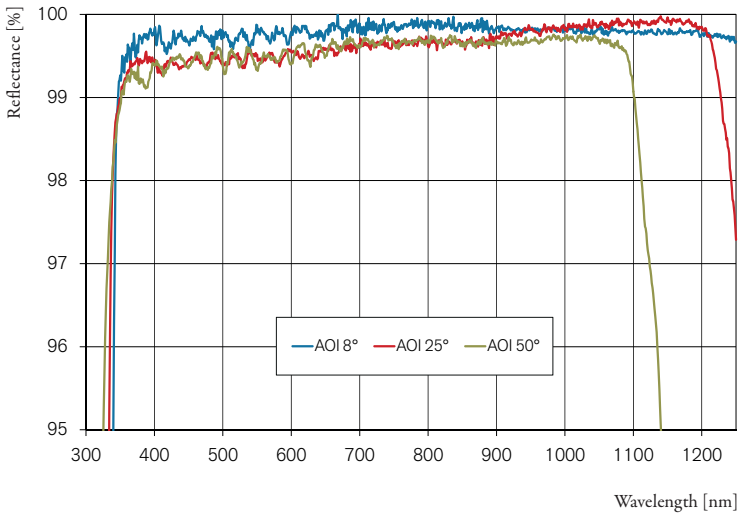

Fig.1: Measured spectral reflectance of unpolarized light, AOI 8°, 25°, 50°

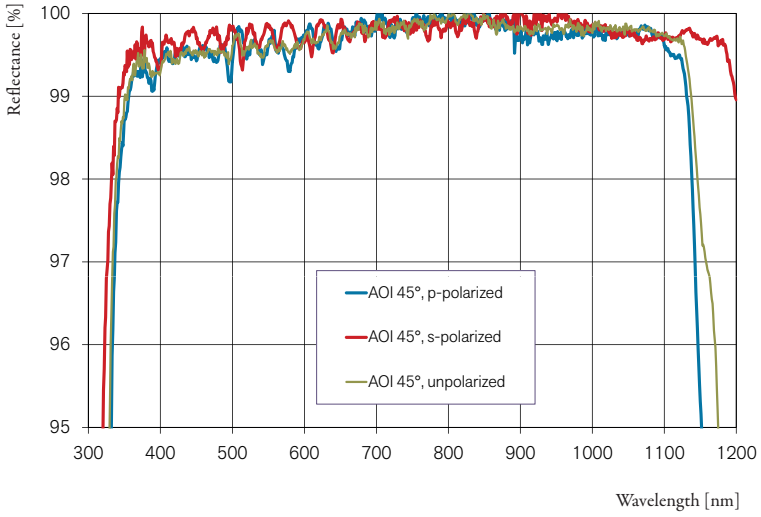

Fig.2: Measured spectral reflectance of p-, s- and unpolarized light, AOI 45°

Diflex™ Broadband Dielectric Mirror 320 – 2000 nm

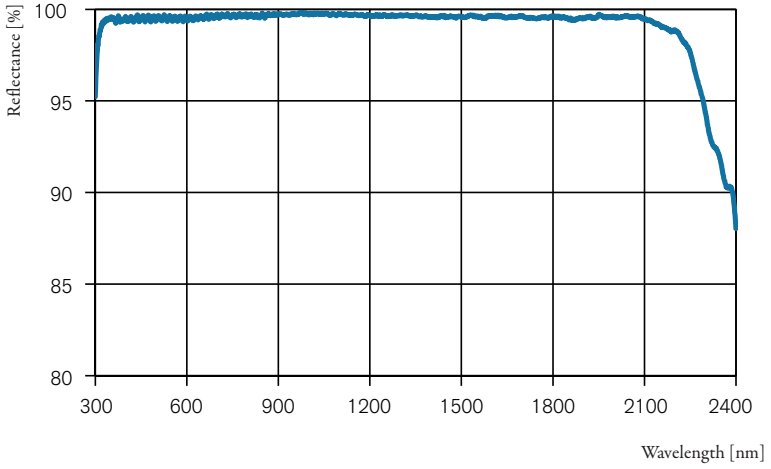

Fig.3: Measured spectral reflectance, AOI 8°

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