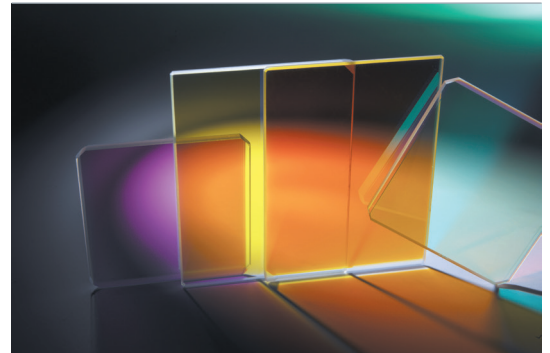




Dichroic Beamsplitters

Low-loss Dichroic Beamsplitters for the UV to NIR Range

Materion Balzers Optics dichroic beamsplitters separate the incoming light in a highly reflected and transmitted part. The transition zone can be reduced to approx. 3% of the transition wavelength for random polarized light. The all-dielectric interference filters are deposited by plasma-assisted processes and show extreme environmental stability. Filter dimension, spectral characteristic and angle of incidence can be customized.



Benefits

- Sharp separation between reflected and transmitted wavelength range
- > 90 % transmittance / reflectance
- Long-term shift-free spectral performance
- High environmental stability
- Wide flexibility in filter size

Applications

- Fluorescence detection
- Coupling of light sources
- Raman spectroscopy
- Ophthalmologic surgery

Technical Data

Wavelength range

300 – 2000 nm

Reflectance

> 90 – 95 %

Transmittance

> 90 – 95 %, depending on requirements

Angle of incidence

Standard 45°, different AOI on request

Substrate material

Fused silica, BK7 or float glass

Dimensions

Standard size Ø 25 x 3 mm or 36 x 26 x 2 mm, other dimensions on request

Parallelism

< 3 arcmin

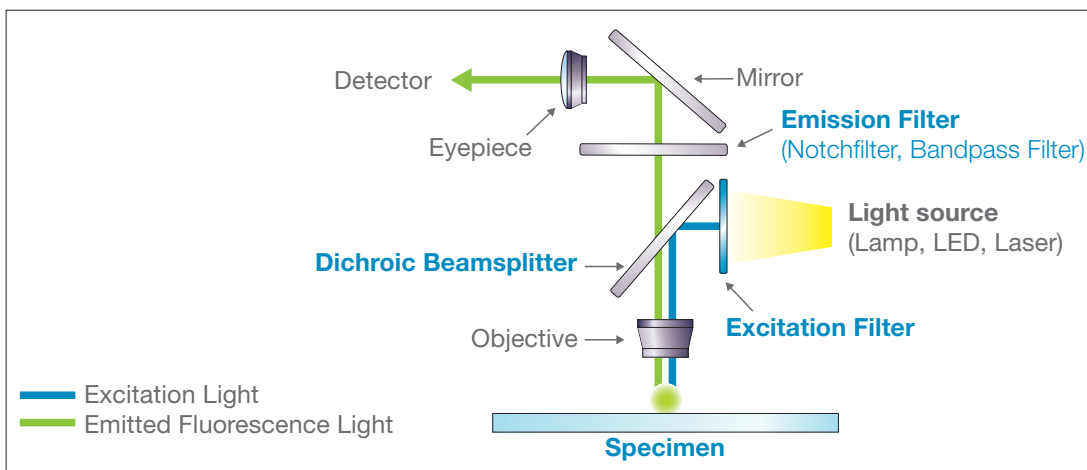
Surface defects

5 / 3 x 0.1

Environmental stability

Temperature -40 °C ... +150 °C

Humidity up to 99 %



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Beamsplitters for VIS Range, AOI 45°

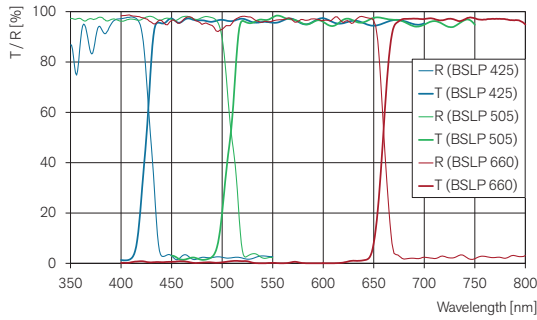


Fig. 1: Measured spectral transmittance and reflectance of unpolarized light at AOI = 45° for VIS range beamsplitters.

Beamsplitters for NIR Range, AOI 45°

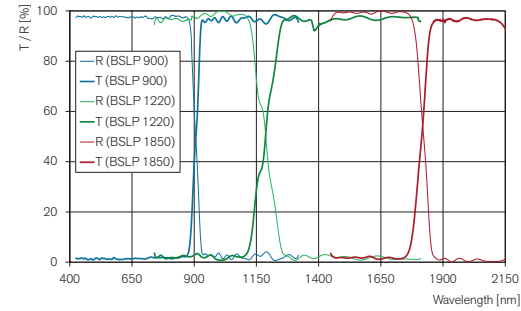


Fig. 2: Measured spectral transmittance and reflectance of unpolarized light at AOI = 45° for NIR range beamsplitters.

Beamsplitters for UV Range, AOI 45°

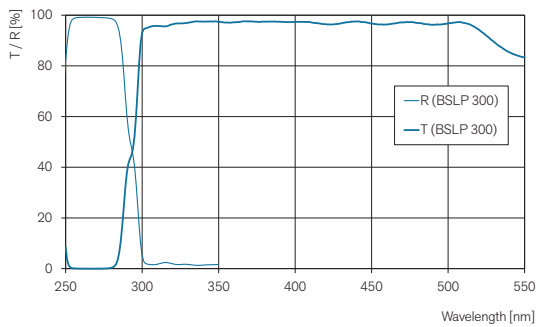


Fig. 3: Measured spectral transmittance and reflectance of unpolarized light at AOI = 45° for UV beamsplitter.

Steep Edge Beamsplitters, AOI 45°

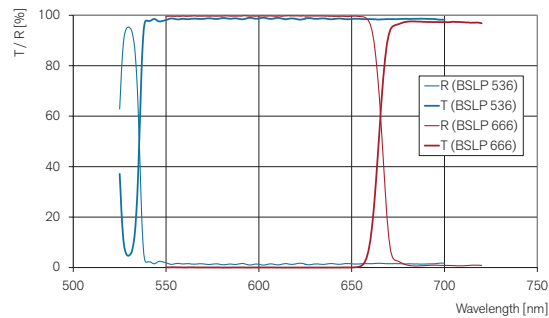


Fig. 4: Measured spectral transmittance and reflectance of unpolarized light at AOI = 45° for steep edge beamsplitters.