



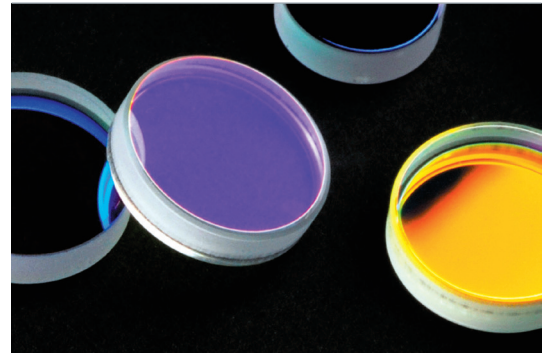
MATERION

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Laser Safety Filters

Safety Filters and Beamsplitters for Ophthalmic Therapy

In ophthalmology instruments, laser safety filters block the therapy laser with high optical density, while showing a high transmittance for the image of the patient's eye background. A sophisticated filter design with narrow blockband and balanced transmission level over the full visible range optimizes color rendering. The beamsplitter controls transmittance and reflectance for both therapy and target laser. The hard-coated filters are longterm stable and available in flexible dimensions.



Benefits

- Selective blocking of laser wavelengths
- High transmittance > 90% in passband
- Longterm shift-free spectral performance
- High environmental stability
- Wide flexibility in filter size

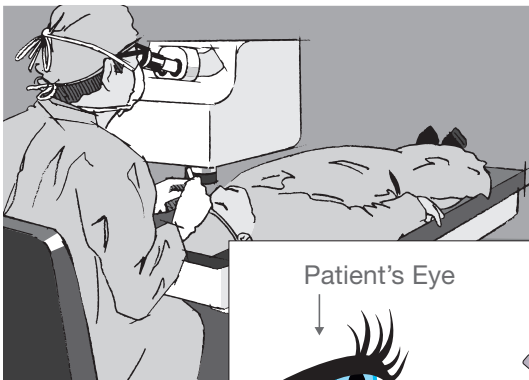
Applications

- Ophthalmic therapy

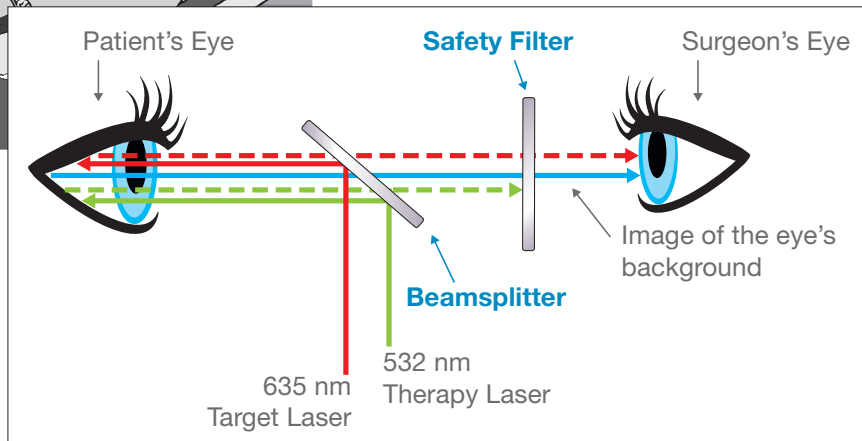
Technical Data

Wavelength	532 nm, 561nm, 659nm (other wavelengths on request)
Blocking	OD5 / OD6
Transmittance	Tave > 90% in passband
Angle of Incidence	standard 0° different AOI on request
Substrate	fused silica or BK7
Dimensions	on request
Parallelism	< 3 arcmin
Surface Defects	5 / 3 x 0.1
Environmental Stability	Temperature - 40 ... + 150 °C Humidity up to 99%

Application Ophthalmologic Surgery



Schematic of Ophthalmic Therapy



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Subject to technical change without notice

Safety Filter 532 nm with Color Correction

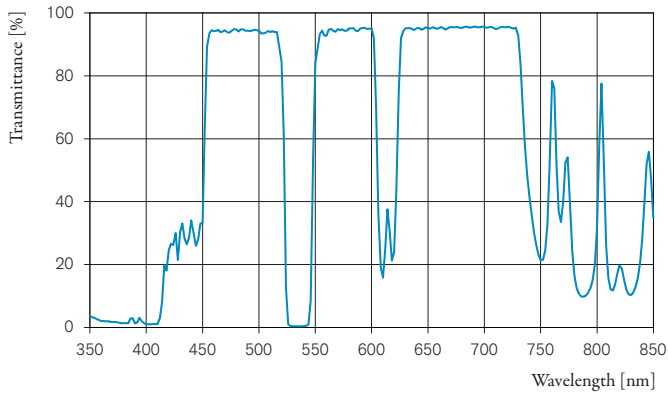


Fig. 1: Measured spectral transmittance

Safety Filter 532-561-659 nm with Color Correction

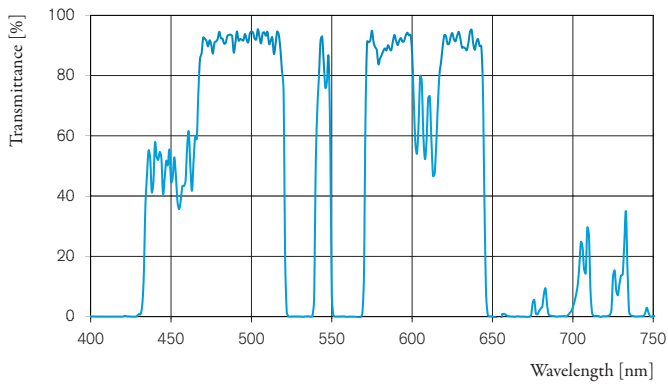


Fig. 2: Measured spectral transmittance

Beamsplitter 532 nm / 635 nm, AOI 40° non-polarized

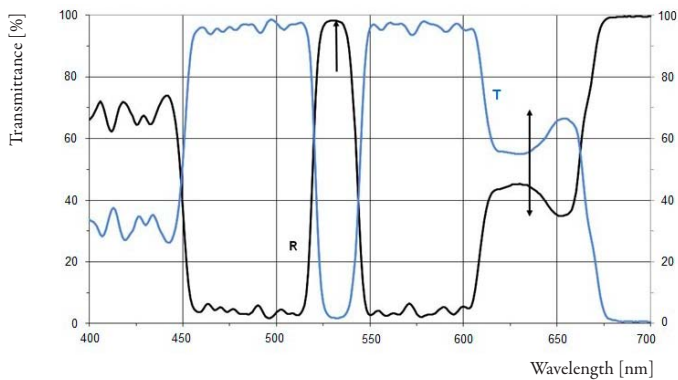


Fig. 3: Measured spectral transmittance, blockband OD3

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