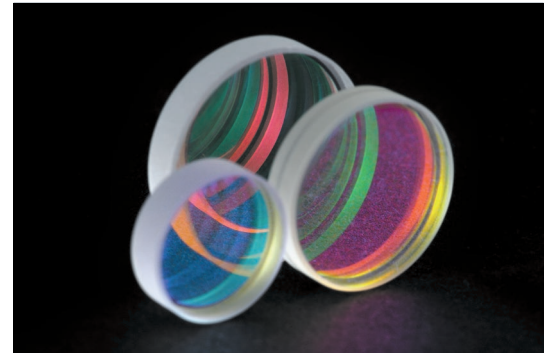


Notch Filters

Narrow-band Single- and Multi-Notch Filters

Unlock precise control over light by using notch filters. These filters selectively block specific wavelengths while ensuring high transmittance across the remaining spectrum. Filters provided by Materion achieve a bandwidth as narrow as 5 nm in the visible (VIS) range, providing accurate filtration for your needs. Explore the versatility of multi-notch filters, capable of blocking multiple wavelength bands to suit applications like fluorescence microscopy or Near-Infrared endoscopy. Constructed with care, our notch filters feature a complex multilayer stack which is deposited by plasma-assisted techniques. This design ensures long-term reliability and consistency in performance. Blocking wavelengths, depth, and angle of incidence can be customized to meet your unique requirements, allowing to achieve optimal results.



Benefits

- Selective blocking of narrow wavelength bands
- High transmittance of more than > 95 % in passband
- Color correction possible on customer request
- Long-term shift-free spectral performance
- High environmental stability
- Wide flexibility in filter size

Applications

- Fluorescence detection
- ICG endoscopy
- Raman spectroscopy
- Laser surgery
- High-resolution microscopy

Technical Data

Wavelength

per request
e.g. 488 nm, 532 nm, 561 nm, 633 nm, 780 nm

Blocking

OD4 to OD8

Transmittance

T > 95 %

Angle of Incidence

standard 0°, different AOI on request

Substrate

fused silica, sapphire or floatglass

Dimensions

per customer request
standard Ø 25 mm x 3 mm

Parallelism

< 3 arcmin

Surface Defects

e.g. 5 / 1 x 0.1 per ISO 10110-7
or 20-10 per MIL-PRF-13830B

Environmental Stability

Temperature – 100 ... + 150 °C
Humidity up to 99 %

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Single Notch Filter 488 nm

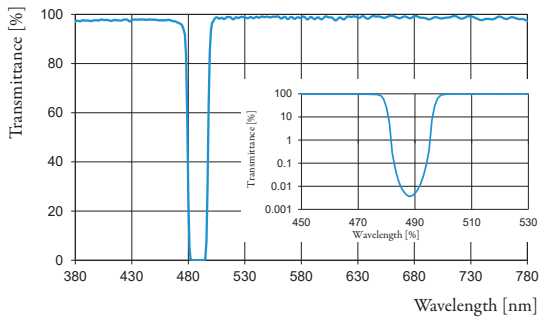


Fig. 1: Measured spectral transmittance of a 15nm notch.
The blocking level is OD4.

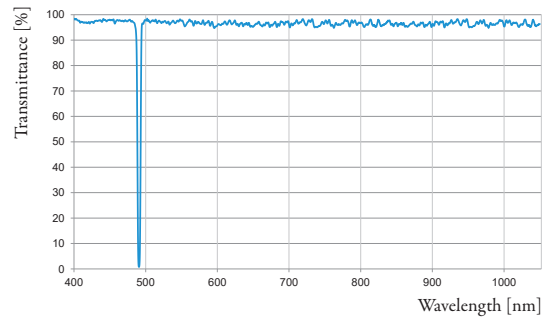


Fig. 2: Measured spectral transmittance of a 5nm notch.

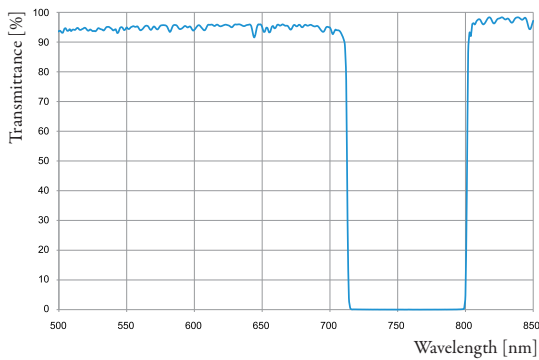


Fig. 3: Notchfilter for Fluorescence endoscopy (measurement).

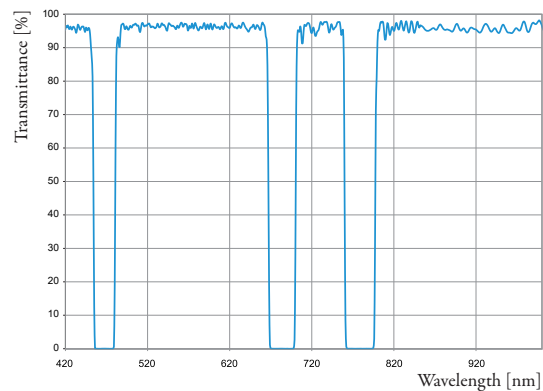


Fig. 4: Measured spectral transmittance of a multi-band notch.

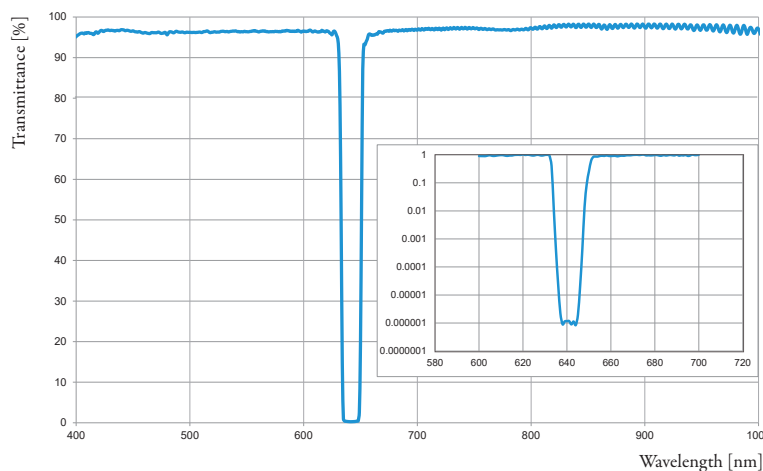


Fig. 5: Measured spectral transmittance of a 15nm notch.
The blocking level is OD6.

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