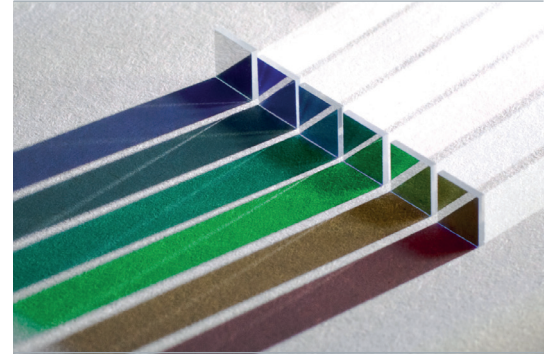




# Narrow Bandpass Filters

## Narrow Bandpass Filters for Biomedical and Industrial Applications

Materion Balzers Optics narrow bandpass filters are characterized by high passband transmittance, accurate center wavelength, steep filter edges between pass- and blockband, and broadband blocking range. With typical passband width between 2 nm and 20 nm, and a blocking depth of OD5 the filters provide an excellent signal-to-noise ratio. In manifold applications, the filters are used to select the appropriate part of the spectrum either from a light source or in front of a photodetector.



### Benefits

- Low loss in passbands
- High power stability because of all-dielectric blocking (no absorption in the VIS / NIR)
- Long-term shift-free spectral performance
- High environmental stability by all-dielectric coating
- Customized filter designs available
- Coating on single substrate, no mounting or cementing

### Applications

- Laser line filters
- Customized LED emission
- Multispectral and hyperspectral imaging
- Highly-sensitive detection of spectral lines

### Technical Data

#### Wavelength

Center wavelength from 320 to 2000 nm

#### Peak Transmittance

$T_{\text{peak}} > 90\%$

#### Bandwidth

2 – 20 nm

#### Blocking

OD5 @ 300 – 1100 nm or OD3 @ 1000 – 2000 nm

#### Angle of Incidence

0°, enlarged angle range on request

#### Substrate

Optical glass

#### Dimensions

Standard size Ø 25 mm, thickness 3 mm,  
other dimensions on request

#### Parallelism

< 3 arcmin

#### Surface Defects

5 / 3 x 0.1

#### Environmental Stability

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

Optics Balzers Jena GmbH  
Otto-Eppenstein-Strasse 2  
07745 Jena

Deutschland  
T +49 3641 3529 30  
F +49 3641 3529 35  
info.mbo@materion.com  
www.materionbalzersoptics.com

### Narrow Bandpass Filters VIS

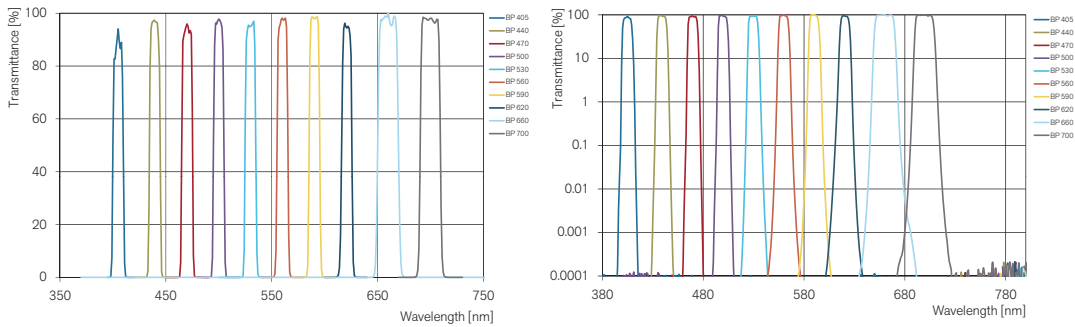


Fig. 1+2: Measured spectral transmittance for a set of narrow bandpass filters in the VIS spectral range.

### Narrow Bandpass Filter BP 532

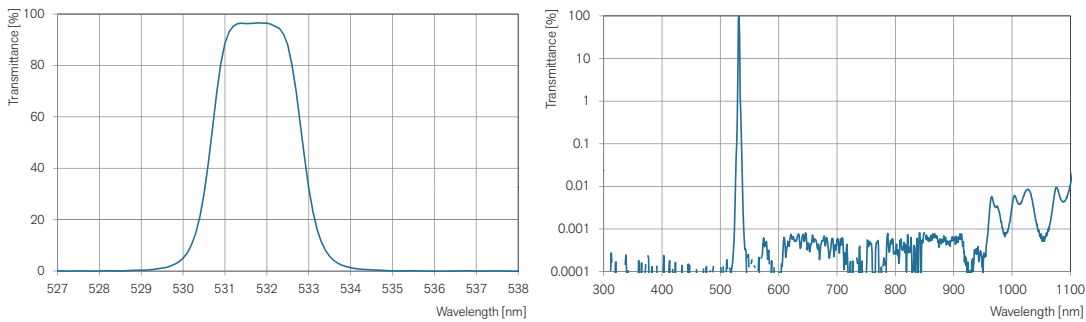


Fig. 3+4: Measured spectral transmittance for a narrow bandpass at 532 nm with 2 nm bandwidth.

### Narrow Bandpass Filter BP 1385

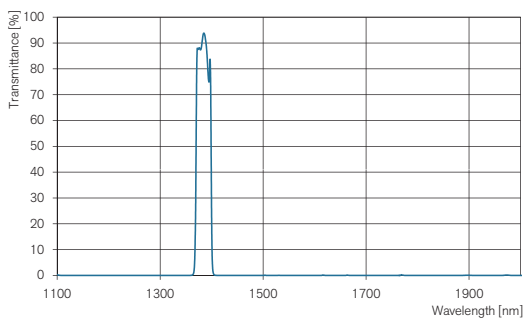


Fig. 5: Measured spectral transmittance for a narrow bandpass at 1385 nm with 30 nm bandwidth.

Optics Balzers Jena GmbH  
Otto-Eppenstein-Strasse 2  
07745 Jena

Deutschland  
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F +49 3641 3529 35  
info.mbo@materion.com  
www.materionbalzersoptics.com