



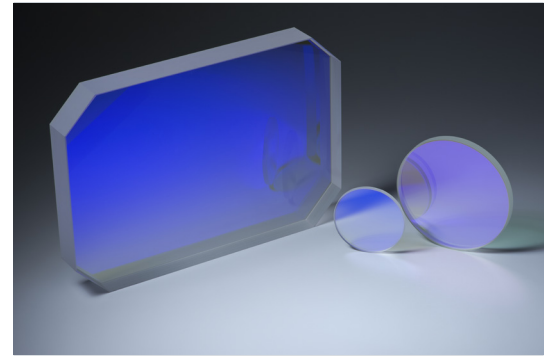
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// BALZERS OPTICS

# Optical Filters for UV Applications

## All-Dielectric UV-Filters from 200 nm to VIS Range

Optics Balzers provides custom-tailored all-dielectric UV-filters from 200 nm to the VIS range. High transmission Bandpass filters, steep edge filters and various other filters are available on request. Blocking levels as low as OD5 can be achieved, predominantly by reflection with minimum absorption. These properties lead to superior irradiation resistance and excellent environmental stability.



### Benefits

- Wide range of filter types
- Deep blocking by high reflectance, low absorption
- High transmittance in the pass range
- Longterm shift-free spectral performance
- High environmental stability
- Excellent irradiation resistance

### Applications

Precise UV irradiance control and wavelength selection is required for many applications like forensic, industrial and medical UV-curing processes, UV-microscopy and contamination detection in microelectronics. Combined with fluorescent tracers well defined UV-light sources are also applied for industrial and automotive leak detection.

### Technical Data

Wavelength	from 200 nm to VIS range
Transmittance	T > 80 – 95% (depending on wavelength range)
Blocking	OD3 – OD5 (according to requirements)
Reflectance	R > 90 – 95%
Angle of Incidence	standard 0°, (different AOI on request)
Substrate	fused silica
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%

### UV Bandpass Filters

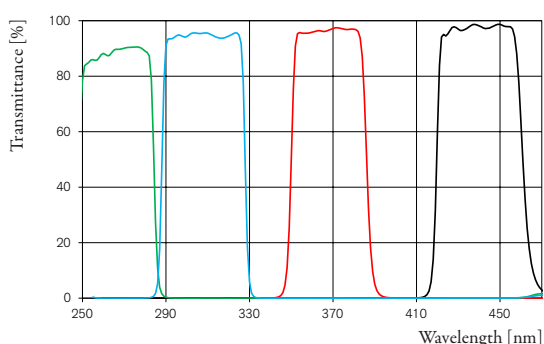


Fig. 1: Bandpass filter examples with blocking OD3. Measured spectral transmittance for normal incidence.

### UV Longpass Filters

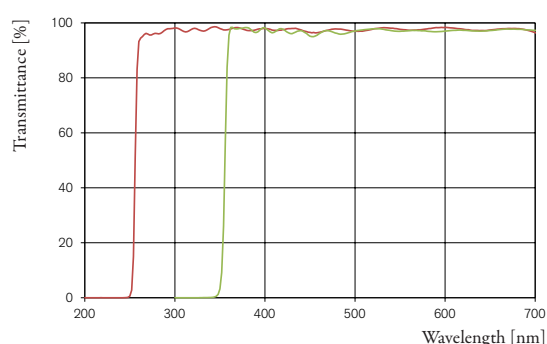


Fig. 2: Long pass filter examples with OD3 blocking. Measured spectral transmittance for normal incidence.

### UV Short Pass Filters

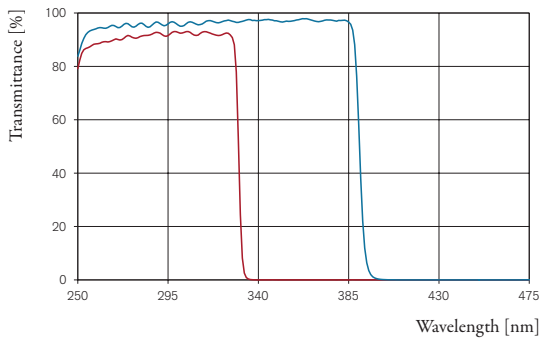


Fig. 3: Bandpass filter examples with OD3 blocking.  
Measured spectral transmittance for normal incidence.

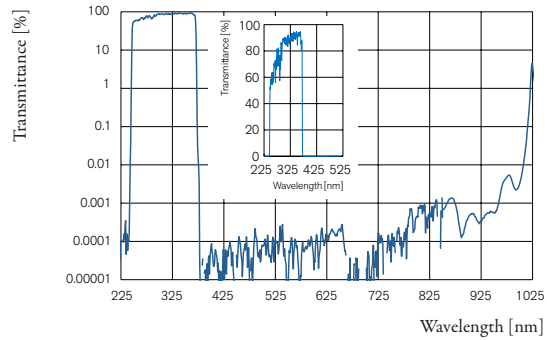


Fig. 4: Short pass filter with ultra-broad blocking better than OD5.  
Measured spectral transmittance for normal incidence.

### Broad Band Reflection Filter

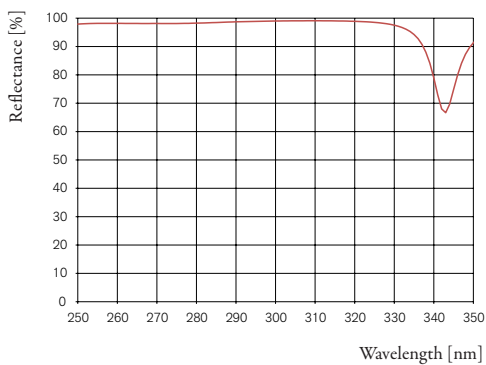


Fig. 5: Measured spectral reflectance of a broad band mirror.

### Narrow Band Pass Filter

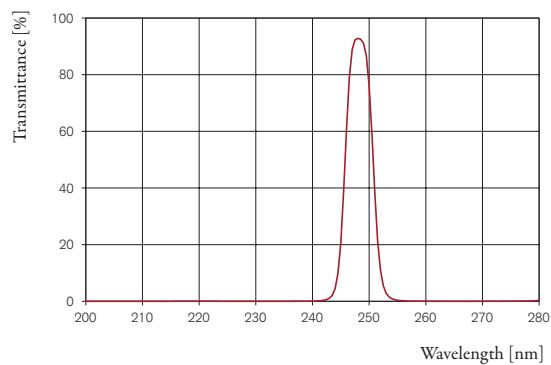


Fig. 6: Measured transmittance spectra for normal incidence.  
Example: High transmittance at 248 nm, Blocking OD3  
with minimized absorption down to 200 nm.