Narrow Bandpass Filters for Gesture Recognition Systems

**NIR Bandpass Filter with Low Angle Dependency and High Performance Blocking**

Gesture recognition and TOF systems like 3D imaging applications require best transmission performance in the range of the illumination wavelength (Laser or LED source) for a wide field of view. Outside the bandpass an extraordinary blocking is required to suppress the ambient illumination for a better contrast. The filters can be provided in various sizes and if required with B-Stage Epoxy or solderable coating frames for optional sealing.

**Benefits**
- Design experience for customized solutions
- Fast sampling possible
- High volume production
- Customized filter sizes
- Optional sealing technologies available

**Applications**
- Gesture recognition system
- 3D imaging applications
- Multi purpose cameras for the automotive market
- Distance measurement systems

**Technical Data**

**Transmittance in the bandpass**
- $T_{avg} > 94\%$ in the bandpass NIR

**Blocking in the cut off bands**
- OD>4 avg (UV and VIS)
- OD>3 avg (up to 1.2 µm)
- OD>2 abs

**Slope**
- $T(90\%) - T(10\%) < 10\ nm$

**CWL shift as a function of AOI**
- < 12 nm up to 30° AOI

**Max substrate size**
- 200 mm round

**Design adjustments**
- According to application and customer requirements possible
NIR Bandpass Filter with back side AR

![Graph showing transmittance vs wavelength with AOI angles](image)

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