meadowlark optics
polarization solutions

BANDPASS POLARIZER

Manufactured by depositing the filter coating on fused silica, our bandpass polarizer works well in situations for when the user only wants a small wavelength range to pass through with a specific polarization.

Bandpass polarizers are reflective, reflecting away the undesired polarization. This allows bandpass polarizers to be used in a mount that makes them a beamsplitting polarizer and increases the recommended safe operating limit to levels required for use with high powered laser. Bandpass polarizers have a high transmission of over 95% and an excellent contrast ratio (1,000,000:1 or OD6). Additionally, this product can be used in precision imaging systems courtesy of its low transmitted wavefront error.

For any additional questions, please visit our website or contact your Meadowlark Optics Sales Engineer for assistance.

Applications

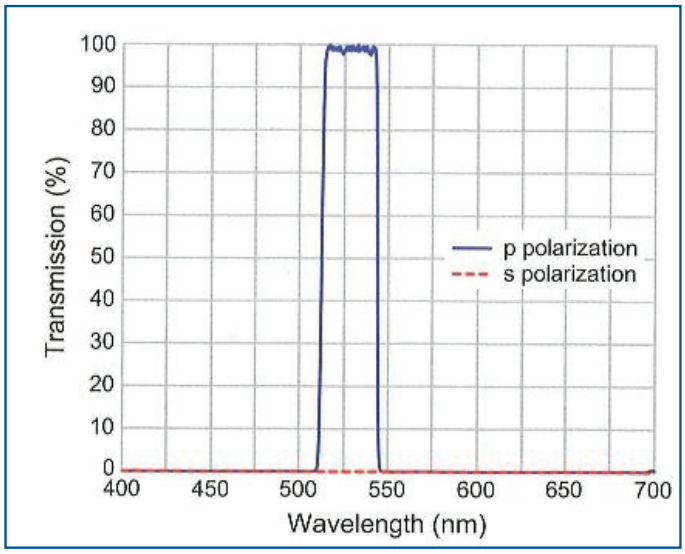
Bandpass polarizers are being used in a diverse range of applications including:

- Laser source clean up filters
- Holography
- Interferometry
- Fluorescence imaging
- Polarization diversity detection
- Laser material processing
- High power applications

Key Features

- Transmission of greater than 95%
- Contrast Ratio on the order of 1,000,000 to 1
- Blocks all light outside the wavelength range

Transmission vs. Wavelength



Transmission versus Wavelength graph over the usable wavelength range for the 532 nm version of the bandpass polarizer.

SPECIFICATIONS	
Substrate Material	Fused Silica
Standard Wavelengths	405, 532, 640 nm
Wavelength Ranges	405: 400 - 410 nm 532: 518 - 541 nm 640: 629 - 650 nm
Transmitted Wavefront Distortion	≤ λ/2 (P-V @ 633) [≤ λ/8 (RMS @ 633)]
Surface Quality	40-20 scratch-dig
Beam Deviation	≤ 10 arc sec
Acceptance Angle	45.0° ± 0.5°
Clear Aperture	Central 21 mm diameter
Laser Damage Threshold	1 J/cm^2, 532 nm

ORDERING INFORMATION	
Diameter (in.)	*Part Number*
1.70 [43.2 mm]	PFM - 170 - λ

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