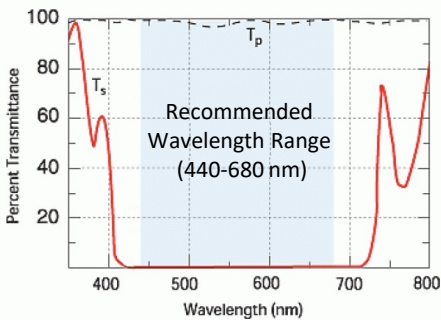


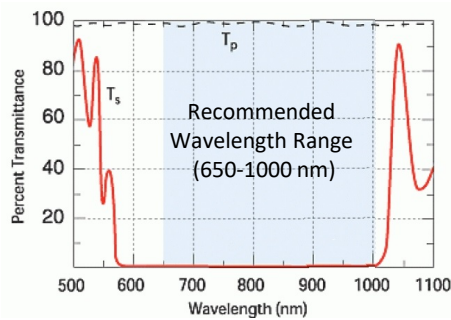
## Broadband Beamsplitting Polarizer

For applications involving broadband or tunable wavelength sources, Meadowlark Optics presents a line of Broadband Beamsplitting Polarizers covering the visible to near infrared region. These cubes offer increased utility for a range of polarization needs. As with the Laser Line Beamsplitting Polarizers, two usable polarization forms result, conveniently separated by 90°. For unpolarized input, incident light will be equally split, 50% transmitted and reflected. Varying the input polarization axis will change the split ratio. These broadband designs require well-collimated input and accurate angular alignment for optimal performance. All four entrance and exit faces are antireflection coated to minimize losses.

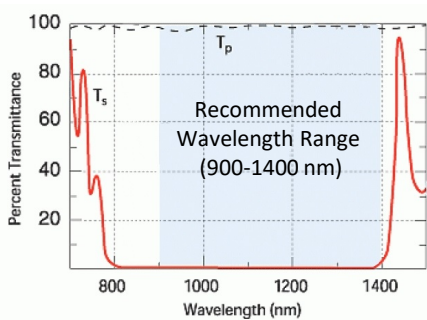
**Typical Design Performance of Visible Broadband Beamsplitting Polarizer**



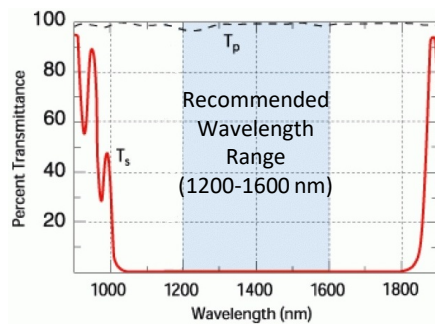
**Typical Design Performance of IR1 Broadband Beamsplitting Polarizer**



**Typical Design Performance of IR2 Broadband Beamsplitting Polarizer**



**Typical Design Performance of IR3 Broadband Beamsplitting Polarizer**



### Key Features

• • •

High contrast

Low reflectance

Broad spectral range

High damage threshold

### Polarization Suite

• • •

#### Linear Polarizers

Precision Linear Polarizer

High Contrast Linear Polarizer

Ultra-High Contrast Linear Polarizer

Glan-Thompson Polarizer

Ultra Broadband Polarizer

MWIR Polarizer

Deep Ultraviolet Polarizer

#### Beamsplitting Polarizers

Wire Grid Versalight Polarizer

Wire Grid Versalight Beam Splitter

Laser Line Beamsplitting Polarizer

Broadband Beamsplitting Polarizer

Polarizing Bandpass Filter

#### Circular Polarizers

Dichroic Circular Polarizer

Beam Separator



SPECIFICATIONS	
<b>Wavelength Range</b>	
Visible	440 – 680 nm
Near IR1	650 – 1000 nm
Near IR2	900 – 1400 nm
Near IR3	1200 – 1600 nm
<b>Substrate Material</b>	SF 2
<b>Surface Quality</b>	40 – 20 scratch - dig
<b>Surface Flatness</b>	$\leq \lambda/8$ (@ 633 nm)
<b>Beam Deviation</b>	$\leq 3$ arc-min
<b>Dimension Tolerance</b>	$\leq +0/-0.20$ mm
<b>Reflectance (per surface)</b>	$\leq 0.5\%$ avg
<b>Contrast Ratio</b>	$\geq 500:1$ (Average)
<b>Transmission (p-polarized light)</b>	$\geq 90\%$ avg
<b>Transmission (s-polarized light)</b>	$\geq 99.8\%$ avg
<b>Clear Aperture</b>	Central 85% diameter
<b>Temperature Range</b>	-50°C to +80°C
<b>Laser Damage Threshold</b>	$\geq 0.5$ J/cm <sup>2</sup> (10 ns)

ORDERING INFORMATION		
Clear Aperture	Dimensions +0.00/– 0.01 in. (+0.00/– 0.25 mm)	Part Number
<b>Visible (440 – 680 nm)</b>		
0.425 × 0.425 × 0.425 (10.8 × 10.8 × 10.8 mm)	0.50 × 0.50 × 0.50 (12.7 × 12.7 × 12.7 mm)	BB – 050 – VIS
0.85 × 0.85 × 0.85 (21.6 × 21.6 × 21.6 mm)	1.00 × 1.00 × 1.00 (25.4 × 25.4 × 25.4 mm)	BB – 100 – VIS
<b>Near IR1 (650 – 1000 nm)</b>		
0.425 × 0.425 × 0.425 (10.8 × 10.8 × 10.8 mm)	0.50 × 0.50 × 0.50 (12.7 × 12.7 × 12.7 mm)	BB – 050 – IR1
0.85 × 0.85 × 0.85 (21.6 × 21.6 × 21.6 mm)	1.00 × 1.00 × 1.00 (25.4 × 25.4 × 25.4 mm)	BB – 100 – IR1
<b>Near IR2 (900 – 1400 nm)</b>		
0.425 × 0.425 × 0.425 (10.8 × 10.8 × 10.8 mm)	0.50 × 0.50 × 0.50 (12.7 × 12.7 × 12.7 mm)	BB – 050 – IR2
0.85 × 0.85 × 0.85 (21.6 × 21.6 × 21.6 mm)	1.00 × 1.00 × 1.00 (25.4 × 25.4 × 25.4 mm)	BB – 100 – IR2
<b>Near IR3 (1200 – 1600 nm)</b>		
0.425 × 0.425 × 0.425 (10.8 × 10.8 × 10.8 mm)	0.50 × 0.50 × 0.50 (12.7 × 12.7 × 12.7 mm)	BB – 050 – IR3
0.85 × 0.85 × 0.85 (21.6 × 21.6 × 21.6 mm)	1.00 × 1.00 × 1.00 (25.4 × 25.4 × 25.4 mm)	BB – 100 – IR3

Custom sizes available. Please contact one of our Solutions Engineers for more information.