

## Broadband Beamsplitting Polarizers

The basic construction of this polarizer line is similar to the Laser Line Beamsplitting Polarizers previously described. Our choice of high-index glass for these polarizers aids in providing such broad usable wavelength ranges. However, these broadband designs require well-collimated input and accurate angular alignment for optimum performance.

All four entrance and exit faces are antireflection coated to minimize losses.

SPECIFICATIONS	
<b>Material</b>	SF 2
<b>Transmitted Wavefront Distortion (at 632.8 nm)</b>	$\leq \lambda/5$ for p-polarized beam
<b>Contrast Ratio</b>	
Transmitted	$\geq 500:1$
Reflected	$\geq 20:1$
<b>Efficiency (average over wavelength range)</b>	
p-polarized light	$\geq 95\%$ transmitted
s-polarized light	$\geq 98\%$ reflected
<b>Clear Aperture</b>	Central 80% diameter
<b>Reflectance (per surface)</b>	$\leq 0.5\%$ average at normal incidence
<b>Surface Quality</b>	40-20 scratch and dig
<b>Beam Deviation</b>	
Transmitted	$\leq 3$ arc min
Reflected	$\leq 6$ arc min
<b>Acceptance Angle</b>	$\pm 2^\circ$
<b>Wavelength Ranges</b>	
Visible	440-680 nm
Near IR1	620-900 nm
Near IR2	820-1250 nm
Near IR3	1150-1600 nm
<b>Dimensional Tolerance</b>	$\pm 0.020$ in.
<b>Temperature Range</b>	-40° C to +100° C
<b>Recommended Safe Operating Limit</b>	500 W/cm <sup>2</sup> , CW 300 mJ/cm <sup>2</sup> , 10 ns, visible 200 mJ/cm <sup>2</sup> , 10 ns, 1064 nm

ORDERING INFORMATION	
<i>Dimensions</i> A = B = C (in.)	<i>Part</i> <i>Number</i>
Visible (440-680 nm)	
0.50	BB - 050 - VIS
1.00	BB - 100 - VIS
Near IR1 (620-900 nm)	
0.50	BB - 050 - IR1
1.00	BB - 100 - IR1
Near IR2 (820-1250 nm)	
0.50	BB - 050 - IR2
1.00	BB - 100 - IR2
Near IR3 (1150-1600 nm)	
0.50	BB - 050 - IR3
1.00	BB - 100 - IR3
<i>Custom sizes are available. Please contact our Sales Department.</i>	