



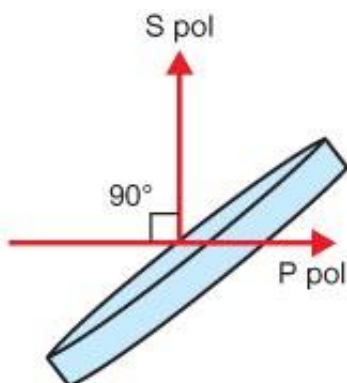
Thin-Film Plate Polarizers

- Wide acceptance angle and no angle tuning required
- 45° design separates *s* and *p* by 90°; optical side 2 coating loss < 0.1%
- Extinction ratios greater than 1000:1 ; no AR coating necessary
- RoHs Compliant

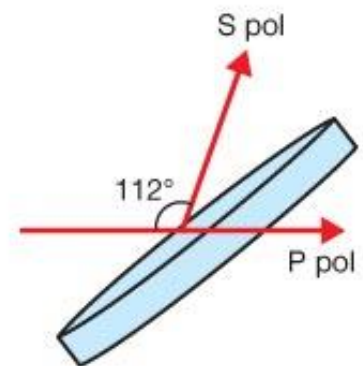
These thin-film plate polarizers utilize our advanced ion-beam-sputtered (>IBS) coating technology to achieve high-power performance and guaranteed transmission at a specific angle of incidence, with no angle tuning required. By combining durable dielectric coatings with fused silica substrates, we produce robust optical components that are stable, easy to align and exhibit high laser damage thresholds in both reflection and transmission.

High energy plate polarizers separate *s* and *p* polarizations with an extinction ratio (T_p/T_s) of greater than 750 to 1000:1 in the transmitted beam. Thus, they are ideal for intracavity or extracavity high-power applications where fluences are greater than 500 mJ/cm² and calcite or cemented cube polarizers cannot be used. 45 degree and/or Brewster-angle plate polarizers are available for wavelengths from 355 nm to 3000 nm.

For other wavelengths throughout the visible and near-IR (including Nd:YAG and fiber-laser wavelengths), substrate sizes or angles of incidence, please contact us.



PO1045 Right-Angle Polarizer



PO1056 Brewster-Angle Polarizer

*IBS polarizers achieve high extinction ratios for high-power applications because they are actually microscopic versions of "pile-of-plates" polarizers. Each thin-film layer is arranged to transmit *p*-polarized light only. The *s*-*

polarized light sees a multi-layer reflector.

Thin-Film Polarizer Characteristics

Model Number	PO1045-FY	PO1045-DY	PO1056-FY	PO1056-DY	PO1056-TY
Type	45° Polarizer	45° Polarizer	Brewster Polarizer	Brewster Polarizer	Brewster Polarizer
Wavelength	1064 nm	532 nm	1064 nm	532 nm	355 nm
Acceptance Angle	45° ±1°	45° ±1°	56° ±2°	56° ±2°	56° ±2°
p Transmission	>98%	>97%	>98%	>98%	>95%
s Transmission	<0.1%	<0.2%	<0.1%	<0.2%	<0.2%
Extinction Ratio, T _p /T _s	>1000:1	>750:1	>5000:1	>1000:1	>200:1
Surface Quality	10/5	10/5	10/5	10/5	10/5
Transmitted Wavefront Distortion	λ/10	λ/10	λ/10	λ/10	λ/10
Clear Aperture	>90%	>90%	>90%	>90%	>90%
Parallelism	<30 arcsec	<30 arcsec	<30 arcsec	<30 arcsec	<30 arcsec
Damage Threshold	≥10 J/cm², 20ns, 20Hz	>4 J/cm ² , 20ns, 20Hz	≥10 J/cm², 20ns, 20Hz	>4 J/cm ² , 10ns, 20Hz	>2 J/cm ² , 10ns, 20Hz
Substrate Material	Fused Silica	Fused Silica	Fused Silica	Fused Silica	Fused Silica
Size	1.00"×0.25"	1.00"×0.25"	1.00"×0.25"	1.00"×0.25"	1.00"×0.25"
Price*	\$450	\$500	\$425	\$475	\$650

† Diameter x Thickness. Contact us for other sizes.

* For international prices, add 10%.