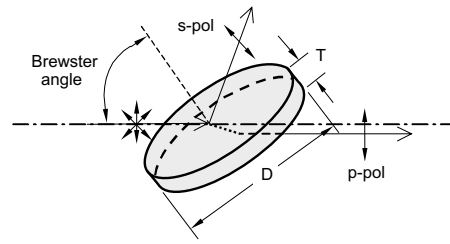




THIN FILM POLARIZERS (56° Angle of Incidence)

Thin film polarizers separate s- and p- polarization components. Due to their high laser damage threshold, thin film polarizers can be used as an alternative to Glan-Taylor laser polarizing prisms or cube polarizing beamsplitters.

Femtoline thin film laser polarizers are designed for use in high energy lasers. They can be used for Yb:KYW/KGW or Ti:Sapphire laser fundamental wavelengths or their harmonics, as well as intracavity Q-switch hold-off polarizers. The most efficient way to use these polarizers is at Brewster's angle – $56 \pm 2^\circ$.



Specifications

Material	BK7, UV FS
Surface quality	20 – 10 scratch & dig (MIL-PRF-13830B)
Transmitted wavefront distortion	$\lambda/10$ @ 633 nm
Angle of incidence (AOI)	$56 \pm 2^\circ$
Laser damage threshold	$>100 \text{ mJ/cm}^2$, 50 fsec pulse, 50 Hz, 800 nm typical

THIN FILM POLARIZERS WITH HIGH EXTINCTION RATIO

Round Polarizers. Material – UV FS. $T_p > 98\%$, $T_s < 0.1\%$.
Extinction ratio for transmitted light $T_p/T_s > 1000:1$

Wavelength, nm	Diameter D, mm	Thickness T, mm	Catalogue number	Price, EUR
343	25.4	3	420-1242HE	251
515	25.4	3	420-1244HE	213
800	25.4	3	420-1256HE	213
780 – 820	25.4	3	420-1266HE	316
1030	25.4	3	420-1248HE	248

Rectangular Polarizers. Material – UV FS. $T_p > 98\%$, $T_s < 0.1\%$.
Extinction ratio for transmitted light $T_p/T_s > 1000:1$

Wavelength, nm	Rectangular dimensions Length, mm	Width, mm	Thickness T, mm	Catalogue number	Price, EUR
1030	20	15	6	420-1478HE	190
1030	30	20	6	420-1578HE	253

HIGH TRANSMISSION THIN FILM POLARIZERS

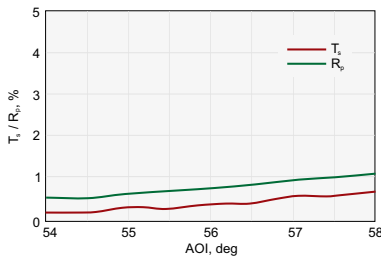
Round Polarizers. Material – UV FS. $R_s/T_p > 99.5/99.0\%$.
Extinction ratio for transmitted light $T_p/T_s > 200:1$

Wavelength, nm	Diameter D, mm	Thickness T, mm	Catalogue number	Price, EUR
343	25.4	3.0	420-1242HT	273
515	25.4	3.0	420-1244HT	230
800	25.4	3.0	420-1256HT	230
1030	25.4	3.0	420-1248HT	269

ULTRA HIGH TRANSMISSION THIN FILM POLARIZERS

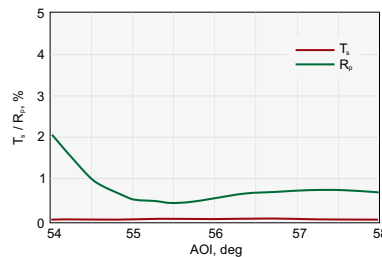
Round Polarizers. Material – UV FS. $T_s < 0.2\%$, $R_p < 0.2\%$.
Extinction ratio for transmitted light $T_p/T_s > 500:1$

Wavelength, nm	Diameter D, mm	Thickness T, mm	Catalogue number	Price, EUR
800	25.4	3.0	420-1256UHT	299
1030	25.4	3.0	420-1248UHT	350



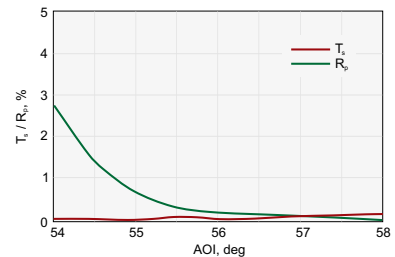
420-1242HT.

High Transmission @ 343 nm,
 $R_s/T_p > 99.5/99.0\%$, AOI= 56°



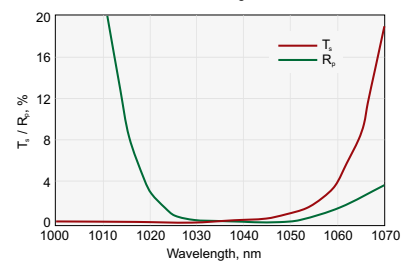
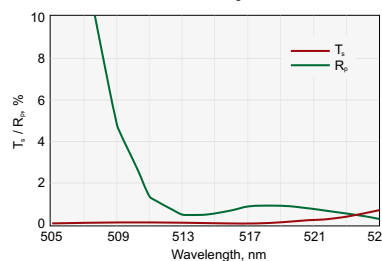
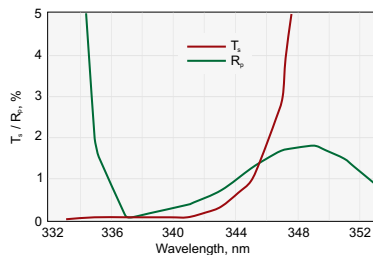
420-1244HT.

High Transmission @ 515 nm,
 $R_s/T_p > 99.5/99.0\%$, AOI= 56°

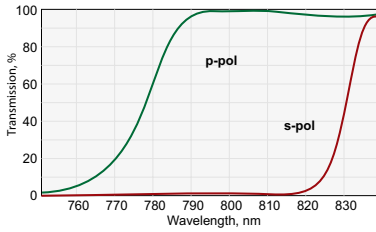


420-1248HT.

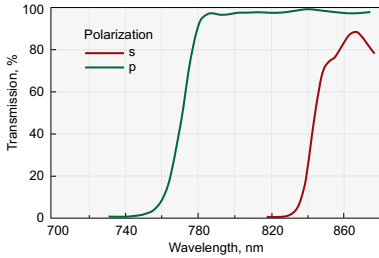
High Transmission @ 1030 nm,
 $R_s/T_p > 99.5/99.0\%$, AOI= 56°



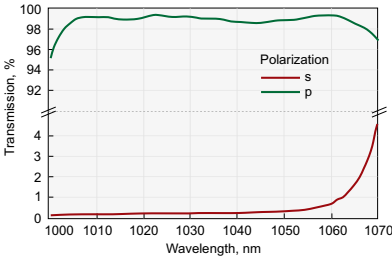
STANDARD THIN FILM POLARIZERS



420-0126E.
Transmission @ 800 nm,
Rs/Tp > 99.5/95.0 %, AOI=56°



420-0266E.
Transmission @ 780-820 nm,
Rs/Tp > 99.5/95.0 %, AOI=56°



420-0268E.
Transmission @ 1010-1050 nm,
Rs/Tp > 99.5/95.0 %, AOI=56°

Please contact us if you need thin film laser polarizers of other wavelengths or other types of substrates.

Related Products

Glan Laser Polarizing, Wollaston Prisms

See page 1.62

Adapters for Polarizer at 56° 840-0117, 840-0118

Find more at EksmaOptics.com



Variable Attenuators for Linearly Polarized Laser Beam 990-0070

See page 4.31



Round Polarizers. Material – BK7. Rs / Tp > 99.5 / 95.0%.
Extinction ratio for transmitted light Tp/Ts > 200:1

Wavelength, nm	Diameter D, mm	Thickness T, mm	Catalogue number	Price, EUR
515	12.7	3.0	420-0114E	124
800	12.7	3.0	420-0126E	124
780-820	12.7	3.0	420-0136E	184
1030	12.7	3.0	420-0118E	132
1010-1050	12.7	3.0	420-0138E	184
515	25.4	3.0	420-0244E	147
800	25.4	3.0	420-0256E	147
780-820	25.4	3.0	420-0266E	217
1030	25.4	3.0	420-0248E	178
1010-1050	25.4	3.0	420-0268E	217
515	50.8	6.0	420-0514E	237
800	50.8	6.0	420-0506E	247
780-820	50.8	6.0	420-0526E	355
1030	50.8	6.0	420-0518E	293
1010-1050	50.8	6.0	420-0528E	385

Rectangular Polarizers. Material – BK7. Rs / Tp > 99.5 / 95.0%.
Extinction ratio for transmitted light Tp/Ts > 200:1

Wavelength, nm	Rectangular dimensions		Thickness T, mm	Catalogue number	Price, EUR
	Length, mm	Width, mm			
515	28.6	14.3	3.0	420-0274	163
800	28.6	14.3	3.0	420-0286	163
780-820	28.6	14.3	3.0	420-0296	253
1030	28.6	14.3	3.0	420-0278	196
1010-1050	28.6	14.3	3.0	420-0298	253

Round Polarizers. Material – UV FS. Rs / Tp > 99.5 / 95.0%.
Extinction ratio for transmitted light Tp/Ts > 200:1

Wavelength, nm	Diameter D, mm	Thickness T, mm	Catalogue number	Price, EUR
343	12.7	3.0	420-1112E	189
400	12.7	3.0	420-1123E	151
515	12.7	3.0	420-1114E	151
800	12.7	3.0	420-1126E	151
780-820	12.7	3.0	420-1136E	225
1030	12.7	3.0	420-1118E	167
1010-1050	12.7	3.0	420-1138E	225
343	25.4	3.0	420-1242E	209
400	25.4	3.0	420-1253E	177
515	25.4	3.0	420-1244E	177
800	25.4	3.0	420-1256E	177
780-820	25.4	3.0	420-1266E	266
1030	25.4	3.0	420-1248E	207
1010-1050	25.4	3.0	420-1268E	266
343	50.8	6.0	420-1512E	374
400	50.8	6.0	420-1503E	339
515	50.8	6.0	420-1514E	339
800	50.8	6.0	420-1506E	351
780-820	50.8	6.0	420-1526E	465
1030	50.8	6.0	420-1518E	362
1010-1050	50.8	6.0	420-1528E	465

Rectangular Polarizers. Material – UV FS. Rs / Tp > 99.5 / 95.0%.
Extinction ratio for transmitted light Tp/Ts > 2 00:1

Wavelength, nm	Rectangular dimensions		Thickness T, mm	Catalogue number	Price, EUR
	Length, mm	Width, mm			
343	28.6	14.3	3.0	420-1272	293
400	28.6	14.3	3.0	420-1283	247
515	28.6	14.3	3.0	420-1274	247
800	28.6	14.3	3.0	420-1286	247
780-820	28.6	14.3	3.0	420-1296	362
1030	28.6	14.3	3.0	420-1278	259
1010-1050	28.6	14.3	3.0	420-1298	362