

THIN FILM LASER POLARIZERS

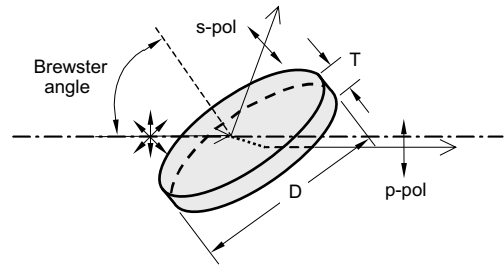
- Provide the achievement of strictly linear polarisation of laser radion
- Utilise the polarization wich occurs on reflection from a plane surface

Thin Film Polariser are designed for use in the most demanding lasers. Due to a high damage threshold reaching 10 J/cm² @ 1064 nm 8 ns, they are used as an alternative to Glan-Taylor laser polarising prisms or cube polarising beamsplitters.

Typical applications are intracavity Q-switch hold-off polarisers or extracavity attenuators for Nd:YAG lasers.

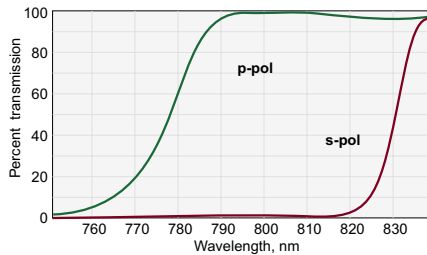
Thin Film Polariser can be used at an > 40° angle of incidence, but polarisation is most efficient and appears in a broad wavelength range at 55° AOI (Brewster angle). Typical polarisation ratio T_p/T_s is 200:1.

Standard size is up to Ø50 mm (2"), while max. available dimensions are 100×200 mm. For optimal transmission a Thin Film Polariser should be mounted in an appropriate holder for angular adjustment.



SPECIFICATIONS

Material	BK7, FS, UV FS
Surface quality	20–10 scratch & dig
Surface flatness	λ/10 @ 633 nm
Parallelism	<30 arcsec
Clear aperture	>90%
Angle of incidence	Brewster angle ±2°
Diameter tolerance	+0.0 -0.12 mm
Thickness tolerance	±0.2 mm
Transmission efficiency	T _p >95%
Extinction ratio T _p /T _s	>200:1
Laser damage threshold	10 J/cm ² 10 nsec pulse at 1064 nm typical



Typical transmission curve @ 800 nm

Catalogue number			Diameter D, mm		Thickness T,	Wavelength,	Price, EUR
BK7	UV FS	FS	Metric	English	mm	nm	BK7 / UV FS / FS
—	420-1123	420-3123	12.5	12.7	3.0	400	- / 119 / 117
420-0126	420-1126	420-3126	12.5	12.7	3.0	800	97 / 119 / 117
—	420-1253	420-3253	25.0	25.4	3.0	400	- / 140 / 133
420-0256	420-1256	420-3256	25.0	25.4	3.0	800	115 / 140 / 133
—	420-1503	420-3503	50.0	50.8	6.0	400	- / 209 / 259
420-0506	420-1506	420-3506	50.0	50.8	6.0	800	185 / 269 / 259

Catalogue number			Rectangular dimensions		Thickness T,	Wavelength,	Price, EUR
BK7	UV FS	FS	Length, mm	Width, mm	mm	nm	BK7 / UV FS / FS
—	420-1283	420-3283	28.6	14.3	3.0	400	- / 215 / 201
420-0286	420-1286	420-3286	28.6	14.3	3.0	800	127 / 215 / 201

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

HOUSING ACCESSORIES

- Kinematic Mirror / Beamsplitter Mounts 840-0056
See page 5.58



Nd:YAG LaserLine

- For Nd:YAG laser applications we offer Thin Film Laser Polarizers
See page 3.13