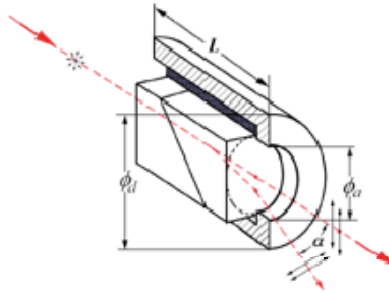


Rochon Polarizer



Rochon polarizer is one of the earliest designs, which is made of two birefringent material prisms cemented together. Both ordinary and extraordinary beams propagate collinearly down the optic axis in the first prism under the ordinary refractive index. Upon entering the second prism the ordinary beam experiences the same refractive index and continues undeviated. The extra-ordinary beam, however, now has a lower refractive index and is refracted at the interface. The angle of refraction is further increased at the birefringent material/air exit surface. Any separation angle can be designed for specific wavelength upon the requirement. The separation angle of standard products vs wavelength is shown in the plot below.

Specifications:

Material: α -BBO, YVO₄, Quartz, MgF₂

Wavelength Range: α -BBO: 190-3500nm, YVO₄: 400-4000nm, Quartz: 200-2300nm, MgF₂: 120-7500nm

Extinction Ratio: α -BBO, YVO₄: $<5 \times 10^{-6}$; Quartz: $<4 \times 10^{-6}$, MgF₂: $<5 \times 10^{-5}$

Parallelism: <1 arc Min.

Surface Quality: 20-10

Beam Deviation: < 3 arc minutes

Wavefront Distortion: $\lambda/4@633\text{nm}$

Damage Threshold: >500 MW/cm²

Coating: Single layer MgF₂

Mount: Black Anodized Aluminium

P/N	Material	Extinction Ratio	Separation Angle(°)	C.A.	O.D.	L
71601	α -BBO	$<5 \times 10^{-6}$	8.0°~14°	6	15	8
71602	α -BBO	$<5 \times 10^{-6}$	8.0°~14°	8	25.4	11
71603	α -BBO	$<5 \times 10^{-6}$	8.0°~14°	10	25.4	13
71604	α -BBO	$<5 \times 10^{-6}$	8.0°~14°	15	30	18
71605	α -BBO	$<5 \times 10^{-6}$	8.0°~14°	20	38	22
71606	Quartz	$<4 \times 10^{-6}$	1.0°~1.5°	6	15	16
71607	Quartz	$<4 \times 10^{-6}$	1.0°~1.5°	8	25.4	20
71608	Quartz	$<4 \times 10^{-6}$	1.0°~1.5°	10	25.4	25
71609	Quartz	$<4 \times 10^{-6}$	1.0°~1.5°	15	30	35
71610	Quartz	$<4 \times 10^{-6}$	1.0°~1.5°	20	38	45

P/N	Material	Extinction Ratio	Separation Angle(°)	C.A.	O.D.	L
71611	YVO4	$<5 \times 10^{-6}$	9.8°~13.0°	6	15	8
71612	YVO4	$<5 \times 10^{-6}$	9.8°~13.0°	8	25.4	11
71613	YVO4	$<5 \times 10^{-6}$	9.8°~13.0°	10	25.4	13
71614	YVO4	$<5 \times 10^{-6}$	9.8°~13.0°	15	30	18
71615	YVO4	$<5 \times 10^{-6}$	9.8°~13.0°	20	38	22
71616	MgF2	$<5 \times 10^{-5}$	1.35°@532nm	6	15	16
71617	MgF2	$<5 \times 10^{-5}$	1.35°@532nm	8	25.4	20
71618	MgF2	$<5 \times 10^{-5}$	1.35°@532nm	10	25.4	25
71619	MgF2	$<5 \times 10^{-5}$	1.35°@532nm	15	30	35
71620	MgF2	$<5 \times 10^{-5}$	1.35°@532nm	20	38	45
71620	MgF2	$<5 \times 10^{-5}$	1.35°@532nm	20	38	45

- Dimension unit:mm
- Other sizes and coatings are available upon request.