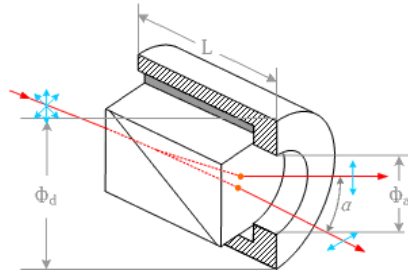


Glan Thompson Polarizer



Glan Thompson polarizer is made of two calcite prisms or a -BBO prisms cemented together. Two types of Glan Thompsons are available. One is the standard form and the other is the long form. Their length to aperture ratios are 2.5 : 1 and 3.0 : 1 respectively. Glan Thompsons tend to have higher extinction ratio than air spaced polarizers. In the ultra violet spectrum, their transmission is limited by absorption in birefringent materials as well as the cement layer. a -BBO polarizers and Calcite polarizers can be used from about 220 to 900nm and 350 to 2300 nm respectively.

The polarizers have the widest field angle of any design. The standard form of this polarizer with 2.5:1 length to aperture ratio has a full acceptance cone angle of more than 15 ° @ 589nm, symmetric about the input axis, whilst the long form with 3:1 ratio has a field angle >26 ° . The polarized field F1 and F2 of all these is shown in the plot below.

Specifications:

Material: α-BBO, Calcite

Wavelength Range: α-BBO:220-900nm, Calcite:350-2300nm

Extinction Ratio: α-BBO: 5×10^{-6}; Calcite: 5×10^{-5}

Parallelism: 1 arc Min.

Surface Quality: 20-10

Beam Deviation: 3 arc minutes

Wavefront Distortion: $\lambda/3@633\text{nm}$

Damage Threshold: >200MW/cm²

Coating: Single layer MgF₂

Mount: Black Anodized Aluminium

P/N	Material	L/CA	Extinction Ratio	Angular Field(°)	C.A.	O.D.	L
71301	α-BBO	1.6	5×10^{-6}	>15	6	15	14
71302	α-BBO	1.6	5×10^{-6}	>15	8	25.4	17
71303	α-BBO	1.6	5×10^{-6}	>15	10	25.4	21
71304	α-BBO	1.6	5×10^{-6}	>15	12.7	25.4	26
71305	α-BBO	1.6	5×10^{-6}	>15	15	30	31
71306	α-BBO	1.6	5×10^{-6}	>15	20	38	40
71307	Calcite	2.5	5×10^{-6}	14-16	6	15	18
71308	Calcite	2.5	5×10^{-6}	14-16	8	25.4	23
71309	Calcite	2.5	5×10^{-6}	14-16	10	25.4	28
71310	Calcite	2.5	5×10^{-6}	14-16	12.7	25.4	35

P/N	Material	L/CA	Extinction Ratio	Angular Field(°)	C.A.	O.D.	L
71311	Calcite	2.5	$<5 \times 10^{-6}$	14-16	15	30	41
71312	Calcite	3	$<5 \times 10^{-6}$	25-28	6	15	21
71313	Calcite	3	$<5 \times 10^{-6}$	25-28	8	25.4	27
71314	Calcite	3	$<5 \times 10^{-6}$	25-28	10	25.4	33
71315	Calcite	3	$<5 \times 10^{-6}$	25-28	12.7	25.4	41
71316	Calcite	3	$<5 \times 10^{-6}$	25-28	15	30	48

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