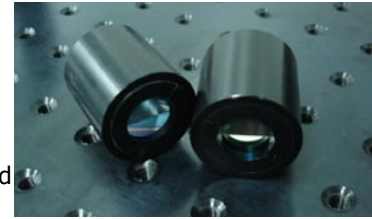
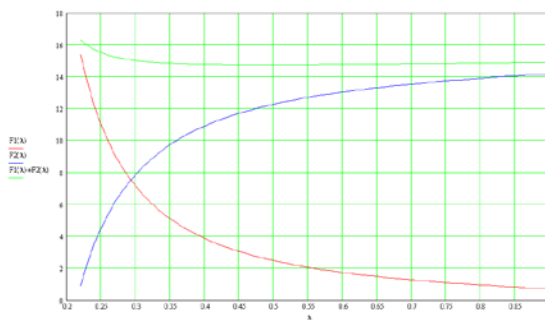


Glan Thompson polarizer is made of two calcite prisms or two  $\alpha$ -BBO prisms cemented together. Two types of Glan Thompsons are available. One is the standard form and the other is the long form. Their length to aperture ratios are 2.5 : 1 and 3.0 : 1 respectively. Glan Thompson polarizers tend 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.  $\alpha$ -BBO polarizers and Calcite polarizers can be used from about 220 to 900nm and 350 to 2300 nm respectively.

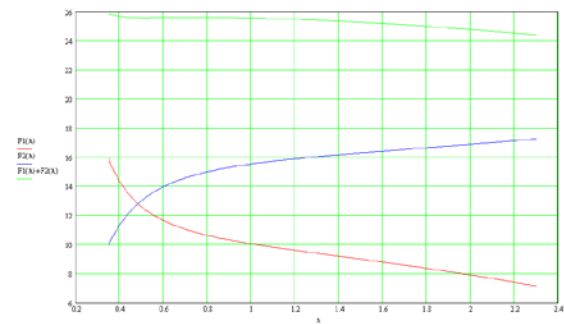


The polarizers have the widest field angle of any design. The standard form of this polarizer with 2.5:1 length to aperture ratio has a full acceptance cone angle of more than  $15^\circ$  @ 589nm, symmetric about the input axis, while the long form with 3:1 ratio has a field angle  $>26^\circ$ . The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

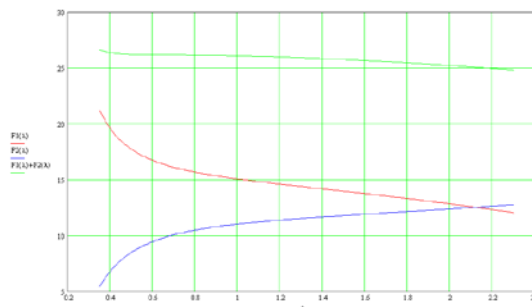
## Angular Field vs Wavelength



$\alpha$ -BBO, 220-900nm



Calcite: L/A=2.5 (350-2300nm)



Calcite: L/A=3.0 (350-2300nm)

## Specifications

Material	$\alpha$ -BBO, Calcite
Wavelength Range	$\alpha$ -BBO: 220-900 nm, Calcite: 350-2300 nm
Extinction Ratio	Calcite: $<5 \times 10^{-5}$ ; $\alpha$ -BBO: $<5 \times 10^{-6}$
Surface Quality	20-10
Beam Deviation	$< 3$ arc minutes
Wavefront Distortion	$< \lambda/4$ @ 633nm
Damage Threshold	$> 200$ MW/cm <sup>2</sup>
Coating	Single MgF <sub>2</sub>
Mount	Black Anodized Aluminium

## Glan Thompson Polarizers

### Standard Products

#### 1. a -BBO Glan Thompson Polarizer(Special for DUV, Visible and NIR(220-900nm))

Part No.	L/CA	Extinction Ratio	Angular Field(°)	C.A.φa (mm)	O.D.φd (mm)	L±0.1(mm)	Unit price
PGM6006				6	15	18	\$398
PGM6008				8	25.4	21	\$438
PGM6010	1.6	<5x10 <sup>-6</sup>	>15	10	25.4	24.5	\$538
PGM6012				12.7	25.4	28.5	\$648
PGM6015				15	30	32.5	\$758
PGM6020				20	38	40.7	\$998

#### 2. Calcite Glan Thompson Polarizer

Part No.	L/CA	Extinction Ratio	Angular Field(°)	C.A.φa (mm)	O.D.φd (mm)	L±0.1(mm)	Unit price
PGM7106				6	15	23	\$238
PGM7108				8	25.4	28	\$268
PGM7110	2.5	<5x10 <sup>-6</sup>	14-16	10	25.4	33	\$318
PGM7112				12.7	25.4	39	\$368
PGM7115				15	30	45.5	\$428
PGM7206				6	15	26	\$308
PGM7208				8	25.4	32	\$338
PGM7210	3	<5x10 <sup>-6</sup>	25-28	10	25.4	38	\$428
PGM7212				12.7	25.4	46	\$498
PGM7215				15	30	53	\$578