

A polarizer is an important optical component that is widely used in optics to produce a state of linear polarization. CryLight supply a wide range of polarizers, including Glan Laser, Glan Taylor, Glan Thompson, Wollaston and Rochon by employing birefringent crystals: α -BBO, Calcite, YVO₄ and quartz. The material properties of birefringent crystals are deciding factors in your selection of the right type polarizer.

Polarizer	Material	Illustrator	Properties and Application
Glan-Taylor Polarizer	α -BBO (190-3500nm) Calcite (350-2300nm) YVO ₄ (500-4000nm)		<ul style="list-style-type: none"> · Air-spaced · Cutting angle close to Brewster's Angle. The extraordinary ray passes through with little deviation. · Sealed mount without escape windows is suitable for low to medium power application where the rejected beam is not required
Glan-Laser Polarizer	α -BBO (190-350nm) Calcite (350-2300nm) YVO ₄ (450-4000nm)		<ul style="list-style-type: none"> · Air-spaced · Cutting angle close to Brewster's angle · Mounted with escape windows. Therefore, it is suitable for high power applications.
Glan Thompson Polarizer	α -BBO (220-3500nm) Calcite (350-2300nm)		<ul style="list-style-type: none"> · Cemented. · Suitable for low power applications. · Special design for the ratio of L/A (length/aperture) guarantees the wide acceptance angle.
Wollaston Polarizer	α -BBO (200-3500nm) Calcite (350-2300nm) YVO ₄ (400-4000nm) Quartz (200-2300nm)		<ul style="list-style-type: none"> · Cemented. · Both ordinary and extraordinary beams are deviated. · Suitable for low power application and where the large deviation is required.
Rochon Polarizer	α -BBO (200-3500nm) YVO ₄ (400-4000nm) Quartz (200-2300)		<ul style="list-style-type: none"> · Made by α-BBO material guaranteeing a wide transmission range, especially, suitable for UV application. · Split the ordinary and extraordinary ray, but only extraordinary beam is deviated. Wide wavelength range
Polarization Beamsplitter	BK7 Grade A Optical Glass or SF5 Optical Glass		<ul style="list-style-type: none"> · Special polarizing coating for · Single wavelength. · Broadband wavelength Regarding their specifications, please see the chapter "Beam Splitters"

Glan Taylor Polarizer

Polarizers

Glan Taylor Polarizer consists two same birefringent material prisms which are separated by an air space. Glan taylor polarizer will divide an entering unpolarized beam into beam rays, one is the extraordinary ray that is transmitted through the other side, another is the ordinary ray that is totally internally reflected and absorbed.

Advantages:

- High Polarization Purity
- High Total Transmission
- Wide Wavelength Range



Specification:

Material:	α-BBO, Calcite
Wavelength Range:	α-BBO:200-3500 nm, Calcite:350-2300 nm
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:	<math>\lambda 4@632.8\text{nm}<="" math><="" td=""> </math>\lambda>
Damage Threshold:	>200 MW/cm ²
Coating:	Single MgF2
Mount:	Black Anodized Aluminium

1. α-BBO Glan Taylor Polarizer

Part No.	Wavelength Rang(nm)	Extinction Ratio	Angular Field(°)	C.A. φa (mm)	O.D. φd (mm)	L±0.1 (mm)
GTP5-206	200-270	5×10^{-6}	>6.0	6.0	15.0	15.0
GTP5-208				8.0	25.4	17.0
GTP5-210				10.0	25.4	19.0
GTP5-215				15.0	30.0	23.0
GTP5-306	300-700	5×10^{-6}	>6.0	6.0	15.0	15.0
GTP5-308				8.0	25.4	17.0
GTP5-310				10.0	25.4	19.0
GTP5-315				15.0	30.0	23.0
GTP5-706	700-3000	5×10^{-6}	>6.0	6.0	15.0	15.0
GTP5-708				8.0	25.4	17.0
GTP5-710				10.0	25.4	19.0
GTP5-715				15.0	30.0	23.0

2. Calcite Glan Taylor Polarizer

Part No.	Wavelength Rang(nm)	Extinction Ratio	Angular Field(°)	C.A. φa (mm)	O.D. φd (mm)	L±0.1 (mm)
GTP6-306	350-2300	5×10^{-5}	>7.7	6.0	15.0	15.0
GTP6-308				8.0	25.4	17.0
GTP6-310				10.0	25.4	19.0
GTP6-315				15.0	30.0	23.0