

Glan Thompson Prisms | GTPB/GTPC

This is a special polarizer with minimal transmission loss, and a high extinction ratio below 5×10^{-5} is obtained. It is used in high-precision polarization experiments. The Calcite can be used in the visible to the infrared region, and α -BBO crystal type usable in the ultraviolet region are available.

Application Systems

Optics & Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators & Adjusters

MotORIZED Stages

Light Sources & Laser Safety

Index

Guide

Mirrors

Beamsplitters

Polarizers

Lenses

Multi-Element Optics

Filters

Prisms

Substrates/Windows

Optical Data

Maintenance

Selection Guide

Polarizing Beamsplitters

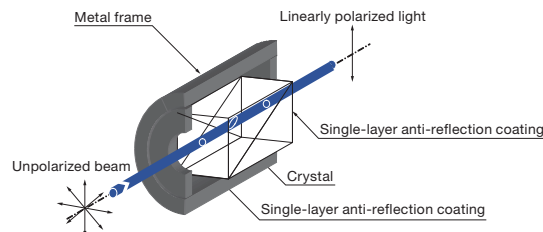
Waveplates

Polarizers

- Glan Thompson prism is housed in a metal frame, and no stress is applied to the inner element when frame is mounted in the holder.
- Calcite type Glan Thompson prism are available in two acceptance angles.
- A single-layer anti-reflection coating has been applied on the surface of the Glan Thompson prism to provide high transmittance.

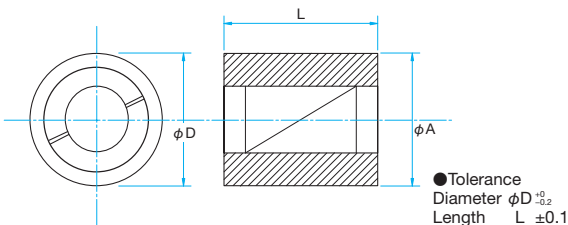


Schematic



Outline Drawing

(in mm)



Specifications

Material	α -BBO, Calcite
Beam Deviation	$<3''$
Transmitted wavefront distortion	$\lambda/4$
Coating	MgF ₂ Single-layer anti-reflection coating
Laser Damage Threshold	0.3J/cm ² (Pulse duration 10ns)
Surface Quality (Scratch-Dig)	20-10
Material of metal frame	Aluminum Finishing: Black anodized

Guide

- ▶ Glan laser prism for high-power laser (GLPB / GLPC) and Wollaston prism (WPPB / WPPC) are also available.
- ▶ If you need uncoated Glan Thompson prism or anti-reflection coating with specific reflectance, please contact our Sales Division with your request.

Attention

- ▶ A change in the incident angle may also change the extinction ratio of the linearly polarized transmitted light.
- ▶ Separation angle will vary depending on the wavelength. Please confirm the wavelength characteristic graph for separation angle.
- ▶ Because of natural calcite crystals, there are individual differences, and variations in quality.

α -BBO

Part Number	Wavelength Range [nm]	Extinction ratio	ϕA [mm]	$\phi D \times L$
GTPB-06-18SN	200 - 900	$<5 \times 10^{-6}$	$\phi 6$	15×18
GTPB-08-21SN	200 - 900	$<5 \times 10^{-6}$	$\phi 8$	25.4×21
GTPB-10-24.5SN	200 - 900	$<5 \times 10^{-6}$	$\phi 10$	25.4×24.5
GTPB-15-32.5SN	200 - 900	$<5 \times 10^{-6}$	$\phi 15$	30×32.5

Calcite

Part Number	Wavelength Range [nm]	Extinction ratio	ϕA [mm]	$\phi D \times L$
GTPC-06-23SN	350 - 2300	$<5 \times 10^{-5}$	$\phi 6$	15×23
GTPC-08-28SN	350 - 2300	$<5 \times 10^{-5}$	$\phi 8$	25.4×28
GTPC-10-33SN	350 - 2300	$<5 \times 10^{-5}$	$\phi 10$	25.4×33
GTPC-15-45.5SN	350 - 2300	$<5 \times 10^{-5}$	$\phi 15$	30×45.5
GTPC-06-26SN	350 - 2300	$<5 \times 10^{-5}$	$\phi 6$	15×26
GTPC-08-32SN	350 - 2300	$<5 \times 10^{-5}$	$\phi 8$	25.4×32
GTPC-10-38SN	350 - 2300	$<5 \times 10^{-5}$	$\phi 10$	25.4×38
GTPC-15-53SN	350 - 2300	$<5 \times 10^{-5}$	$\phi 15$	30×53

Compatible Optic Mounts

GTPC-PH30 / GTPC-SPH30 / GTPC-ADP