

Glan Tayler Prisms | GTPA/GTPC

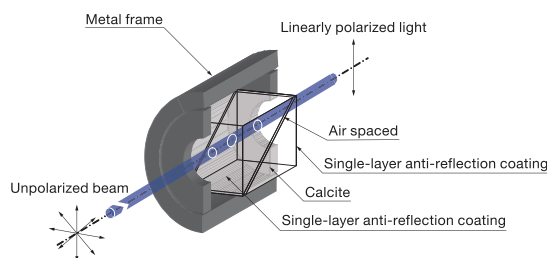
A polarizer with shortest prism length.

The transmission loss is minimal, and a high extinction ratio below 5×10^{-5} is obtained.

The Calcite type that can be used in the range of the visible region to the infrared region, and α -BBO crystal type usable in the ultraviolet region are both available.

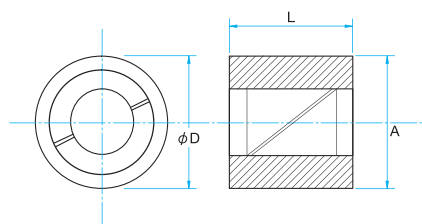


Schematic



Outline Drawing

(in mm)



●Tolerance
Diameter $\phi D \pm 0.1$
Length $L \pm 0.1$

- The two prisms are connected with a small gap (air-gap).
- And reduction in laser damage and absorption by the adhesive is not caused by this.
- A single-layer anti-reflection coating has been applied on the surface of the polarizing prism, a high transmittance is obtained.

Specifications

Material	α -BBO, Calcite
Beam Deviation	$<3''$
Surface Flatness	$\lambda/4$
Coating	MgF ₂ Single-layer anti-reflection coating
Laser Damage Threshold	1J/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 (GLPA/GLPC) and Wollaston prism (WPA/WPC) are also available.
- ▶ If you need uncoated Glan Thompson prism or anti-reflection coating with specific reflectance, please contact our International Sales Division.
- ▶ About the dedicated holder of the Glan Tayler prism, please contact our International Sales Division.

Attention

- ▶ A change in the incident angle may also changes the extinction ratio of the linearly polarized transmitted light.
- ▶ Light not transmitted through the Glan Tayler prism is absorbed and scattered in all side faces of the prism. In the high-precision measurement system, it is necessary to use pinhole to block light scattered in the side face of the prism.
- ▶ Because of natural calcite crystals, there are individual differences, and variations in quality.

α -BBO

Part Number	Wavelength Range [nm]	Extinction ratio	Acceptance angle [°]	A [mm]	$\phi D \times L$
GTPA-06-15SN-2/3	200 - 270	$<5 \times 10^{-6}$	± 3.0	6	15×15
GTPA-08-17SN-2/3	200 - 270	$<5 \times 10^{-6}$	± 3.0	8	25.4×17
GTPA-10-19SN-2/3	200 - 270	$<5 \times 10^{-6}$	± 3.0	10	25.4×19
GTPA-15-23SN-2/3	200 - 270	$<5 \times 10^{-6}$	± 3.0	15	30×23
GTPA-20-29SN-2/3	200 - 270	$<5 \times 10^{-6}$	± 3.0	20	38×29
GTPA-06-15SN-3/7	300 - 700	$<5 \times 10^{-6}$	± 3.0	6	15×15
GTPA-08-17SN-3/7	300 - 700	$<5 \times 10^{-6}$	± 3.0	8	25.4×17
GTPA-10-19SN-3/7	300 - 700	$<5 \times 10^{-6}$	± 3.0	10	25.4×19
GTPA-15-23SN-3/7	300 - 700	$<5 \times 10^{-6}$	± 3.0	15	30×23
GTPA-20-29SN-3/7	300 - 700	$<5 \times 10^{-6}$	± 3.0	20	38×29
GTPA-06-15SN-7/30	700 - 3000	$<5 \times 10^{-6}$	± 3.0	6	15×15
GTPA-08-17SN-7/30	700 - 3000	$<5 \times 10^{-6}$	± 3.0	8	25.4×17
GTPA-10-19SN-7/30	700 - 3000	$<5 \times 10^{-6}$	± 3.0	10	25.4×19
GTPA-15-23SN-7/30	700 - 3000	$<5 \times 10^{-6}$	± 3.0	15	30×23
GTPA-20-29SN-7/30	700 - 3000	$<5 \times 10^{-6}$	± 3.0	20	38×29

Calcite

Part Number	Wavelength Range [nm]	Extinction ratio	Acceptance angle [°]	A [mm]	$\phi D \times L$
GTPC-06-15SN	350 - 2300	$<5 \times 10^{-5}$	± 3.85	6	15×15
GTPC-08-17SN	350 - 2300	$<5 \times 10^{-5}$	± 3.85	8	25.4×17
GTPC-10-19SN	350 - 2300	$<5 \times 10^{-5}$	± 3.85	10	25.4×19
GTPC-15-23SN	350 - 2300	$<5 \times 10^{-5}$	± 3.85	15	30×23
GTPC-20-29SN	350 - 2300	$<5 \times 10^{-5}$	± 3.85	20	38×29

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Glan Thompson Prisms | GTPA/GTPP

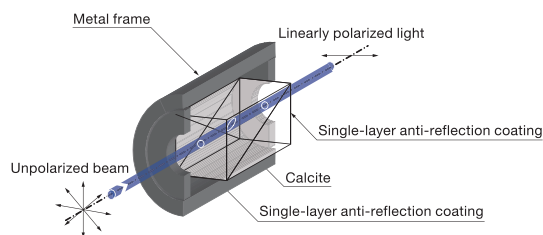
This is a special polarizer with minimal transmission loss, and a high extinction ratio below 5×10^{-5} is obtained. It is used in high-precision polarization experiments.

The Calcite type that can be used in the range of the visible region to the infrared region, and α -BBO crystal type usable in the ultraviolet region are both available.

- 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.
- For Calcite type Glan Thompson prism, the acceptance angle is chosen in two levels.
- A single-layer anti-reflection coating has been applied on the surface of the Glan Thompson prism, a high transmittance is obtained.

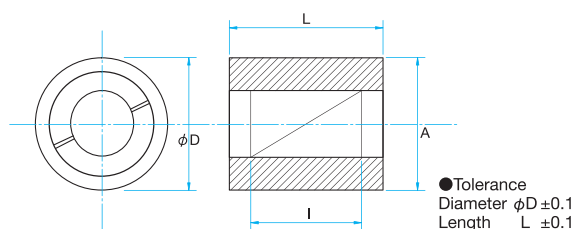


Schematic



Outline Drawing

(in mm)



Specifications

Material	α -BBO, Calcite
Beam Deviation	<3"
Surface Flatness	$\lambda/4$
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 (GTPA/GTPP) and Wollaston prism (WPA/WPC) are also available.
- ▶ If you need uncoated Glan Thompson prism or anti-reflection coating with specific reflectance, please contact our International Sales Division.
- ▶ About the dedicated holder of the Glan Thompson prism, please contact our International Sales Division.

Attention

- ▶ A change in the incident angle may also changes 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	Acceptance angle [°]	A [mm]	$\phi D \times L$
GTPA-06-18SN	200 - 900	$<5 \times 10^{-6}$	± 7.5	6	15×18
GTPA-08-21SN	200 - 900	$<5 \times 10^{-6}$	± 7.5	8	25.4×21
GTPA-10-24.5SN	200 - 900	$<5 \times 10^{-6}$	± 7.5	10	25.4×24.5
GTPA-15-32.5SN	200 - 900	$<5 \times 10^{-6}$	± 7.5	15	30×32.5

Calcite

Part Number	Wavelength Range [nm]	Extinction ratio	Acceptance angle [°]	A [mm]	$\phi D \times L$
GTPP-06-23SN	350 - 2300	$<5 \times 10^{-5}$	± 7	6	15×23
GTPP-08-28SN	350 - 2300	$<5 \times 10^{-5}$	± 7	8	25.4×28
GTPP-10-33SN	350 - 2300	$<5 \times 10^{-5}$	± 7	10	25.4×33
GTPP-15-45.5SN	350 - 2300	$<5 \times 10^{-5}$	± 7	15	30×45.5
GTPP-06-26SN	350 - 2300	$<5 \times 10^{-5}$	± 12.5	6	15×26
GTPP-08-32SN	350 - 2300	$<5 \times 10^{-5}$	± 12.5	8	25.4×32
GTPP-10-38SN	350 - 2300	$<5 \times 10^{-5}$	± 12.5	10	25.4×38
GTPP-15-53SN	350 - 2300	$<5 \times 10^{-5}$	± 12.5	15	30×53

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