

## Glan Laser Prisms | GLPA/GLPC

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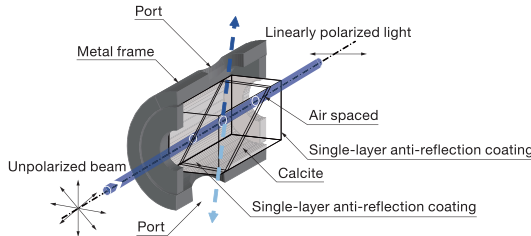
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A polarizer with enhanced laser damage threshold for high power lasers and high energy laser pulses. The transmission loss is minimal, and a high extinction ratio below  $5 \times 10^{-5}$  is obtained. The Calcite type that can be used in the range of the visible region to the infrared region, and  $\alpha$ -BBO crystal type usable in the ultraviolet region are both available.

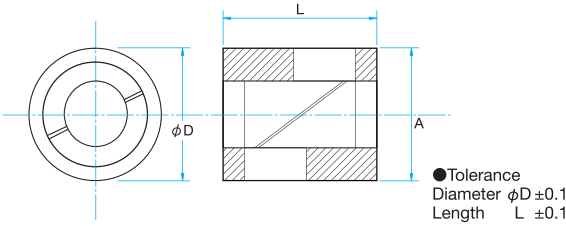


### Schematic



### Outline Drawing

(in mm)



- 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.
- Glan Laser prism is housed in a metal frame. The polarization component which does not pass through the prism exit out of the frame through port (hole) of the metal frame.
- Since there are two ports, the prism can also be used by replacing the input and output direction.
- A single-layer anti-reflection coating has been applied on the surface of the Glan Laser prism, a high transmittance is obtained.

### Specifications

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

### Guide

- ▶ Glan Thompson prism with wider acceptance angle ( GTPA/GTPP ) and Wollaston prism ( WPA/WPC ) are also available.
- ▶ If you need uncoated Glan Laser prism or anti-reflection coating with specific reflectance, please contact our International Sales Division.
- ▶ About the dedicated holder of the Glan Laser 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.
- ▶ Because of natural calcite crystals, there are individual differences, and variations in quality.

### $\alpha$ -BBO

Part Number	Wavelength Range [nm]	Extinction ratio	Acceptance angle [°]	A [mm]	$\phi D \times L$
GLPA-06-29SN-2/3	200 – 270	$<5 \times 10^{-6}$	$\pm 3.0$	6	15×29
GLPA-08-31SN-2/3	200 – 270	$<5 \times 10^{-6}$	$\pm 3.0$	8	25.4×31
GLPA-10-31SN-2/3	200 – 270	$<5 \times 10^{-6}$	$\pm 3.0$	10	25.4×31
GLPA-15-38.6SN-2/3	200 – 270	$<5 \times 10^{-6}$	$\pm 3.0$	15	30×38.6
GLPA-20-48.9SN-2/3	200 – 270	$<5 \times 10^{-6}$	$\pm 3.0$	20	38×48.9
GLPA-06-25SN-3/7	300 – 700	$<5 \times 10^{-6}$	$\pm 3.0$	6	15×25
GLPA-08-25SN-3/7	300 – 700	$<5 \times 10^{-6}$	$\pm 3.0$	8	25.4×25
GLPA-10-26SN-3/7	300 – 700	$<5 \times 10^{-6}$	$\pm 3.0$	10	25.4×26
GLPA-15-33.4SN-3/7	300 – 700	$<5 \times 10^{-6}$	$\pm 3.0$	15	30×33.4
GLPA-20-43.6SN-3/7	300 – 700	$<5 \times 10^{-6}$	$\pm 3.0$	20	38×43.6
GLPA-06-23SN-7/30	700 – 3000	$<5 \times 10^{-6}$	$\pm 3.0$	6	15×23
GLPA-08-24.7SN-7/30	700 – 3000	$<5 \times 10^{-6}$	$\pm 3.0$	8	25.4×24.7
GLPA-10-25.9SN-7/30	700 – 3000	$<5 \times 10^{-6}$	$\pm 3.0$	10	25.4×25.9
GLPA-15-33SN-7/30	700 – 3000	$<5 \times 10^{-6}$	$\pm 3.0$	15	30×33
GLPA-20-43.6SN-7/30	700 – 3000	$<5 \times 10^{-6}$	$\pm 3.0$	20	38×43.6

### Calcite

Part Number	Wavelength Range [nm]	Extinction ratio	Acceptance angle [°]	A [mm]	$\phi D \times L$
GLPC-06-21SN	350 – 2300	$<5 \times 10^{-5}$	$\pm 3.85$	6	15×21
GLPC-08-24.5SN	350 – 2300	$<5 \times 10^{-5}$	$\pm 3.85$	8	25.4×24.5
GLPC-10-26.2SN	350 – 2300	$<5 \times 10^{-5}$	$\pm 3.85$	10	25.4×26.2
GLPC-15-33.3SN	350 – 2300	$<5 \times 10^{-5}$	$\pm 3.85$	15	30×33.3
GLPC-20-42.3SN	350 – 2300	$<5 \times 10^{-5}$	$\pm 3.85$	20	38×42.3