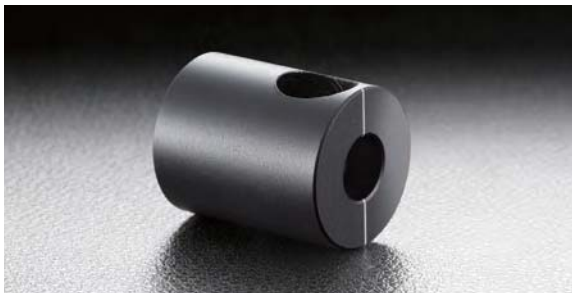
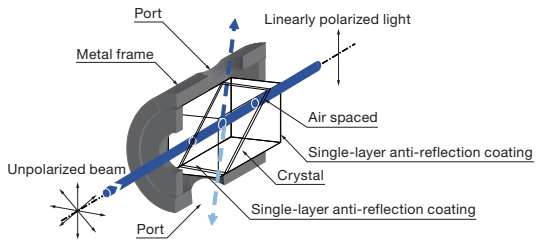
Glan Laser Prisms | GLPB/GLP

The Glan Laser polarizer are designed to provide an enhanced laser damage threshold for high power lasers and high energy laser pulses.
The transmission loss is minimal, and a high extinction ratio below 5×10^{-5} is obtained.
The Calcite type that can be used in the visible to the infrared region,and α-BBO crystal type usable in the ultraviolet region are available.

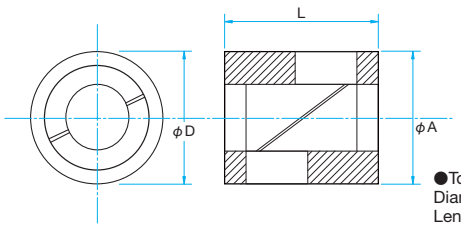


- The two prisms are mounted with a small gap (air-gap) to eliminate the adhesive and reduce laser damage.
- Gran Laser prism is housed in a metal frame. The polarization component which does not pass through the prism exit out of the frame through port (hole) of the metal frame.
- Since there are two 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 to provide higher transmittance.

Schematic



Outline Drawing (in mm)



●Tolerance
Diameter $\phi D\ ^{+0}_{-0.2}$
Length L ±0.1

Specifications

Material	α-BBO, Calcite
Beam Deviation	<3″
Transmitted wavefront distortion	$\lambda/4$
Coating	MgF_2 Single-layer anti-reflection coating
Laser Damage Threshold	2J/cm² (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 (GTPB / GTPC) and Wollaston prism (WPPB / WPPC) are also available.
- If you need uncoated Glan Laser 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.
- Because of natural calcite crystals, there are individual differences, and variations in quality.

α-BBO

Part Number	Wavelength Range [nm]	Extinction ratio	ϕA [mm]	ϕD×L
GLPB2-06-29SN-2/3	200 – 270	$<5\times10^{-6}$	ϕ6	15×29
GLPB2-08-31SN-2/3	200 – 270	$<5\times10^{-6}$	ϕ8	25.4×31
GLPB2-10-31SN-2/3	200 – 270	$<5\times10^{-6}$	ϕ10	25.4×31
GLPB2-15-38.6SN-2/3	200 – 270	$<5\times10^{-6}$	ϕ15	30×38.6
GLPB2-20-48.9SN-2/3	200 – 270	$<5\times10^{-6}$	ϕ20	38×48.9
GLPB2-06-25SN-3/7	300 – 700	$<5\times10^{-6}$	ϕ6	15×25
GLPB2-08-25SN-3/7	300 – 700	$<5\times10^{-6}$	ϕ8	25.4×25
GLPB2-10-26SN-3/7	300 – 700	$<5\times10^{-6}$	ϕ10	25.4×26
GLPB2-15-33.4SN-3/7	300 – 700	$<5\times10^{-6}$	ϕ15	30×33.4
GLPB2-20-43.6SN-3/7	300 – 700	$<5\times10^{-6}$	ϕ20	38×43.6
GLPB2-06-23SN-7/30	700 – 3000	$<5\times10^{-6}$	ϕ6	15×23
GLPB2-08-24.7SN-7/30	700 – 3000	$<5\times10^{-6}$	ϕ8	25.4×24.7
GLPB2-10-25.9SN-7/30	700 – 3000	$<5\times10^{-6}$	ϕ10	25.4×25.9
GLPB2-15-33SN-7/30	700 – 3000	$<5\times10^{-6}$	ϕ15	30×33
GLPB2-20-43.6SN-7/30	700 – 3000	$<5\times10^{-6}$	ϕ20	38×43.6

Calcite

Part Number	Wavelength Range [nm]	Extinction ratio	ϕA [mm]	ϕD×L
GLP2-06-21SN	350 – 2300	$<5\times10^{-5}$	ϕ6	15×21
GLP2-08-24.5SN	350 – 2300	$<5\times10^{-5}$	ϕ8	25.4×24.5
GLP2-10-26.2SN	350 – 2300	$<5\times10^{-5}$	ϕ10	25.4×26.2
GLP2-15-33.3SN	350 – 2300	$<5\times10^{-5}$	ϕ15	30×33.3
GLP2-20-42.3SN	350 – 2300	$<5\times10^{-5}$	ϕ20	38×42.3

Compatible Optic Mounts

GTPC-PH30, -PH50 / GTPC-SPH30, -SPH50 / GTPC-ADP