Wollaston Prisms | WPA/WPC

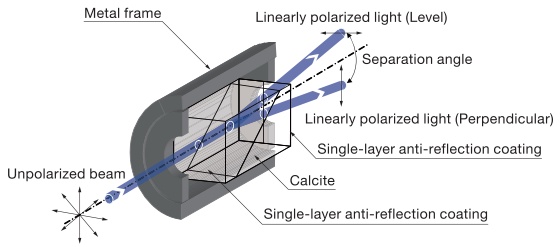
Application Systems
Machine Vision
Manual Positions
Motion Control Products
Optical & Mirror Holder
F A Parts
Measurement &Control
FA Electrical Parts
Tool & Measure
Cleanroom & AntiStatic
Index

Mirrors
Beamsplitters
Filters
Polarizers
Lenses
Multi-Element Optics
Prisms
Substrates & Windows
Holder & Vibration isolator

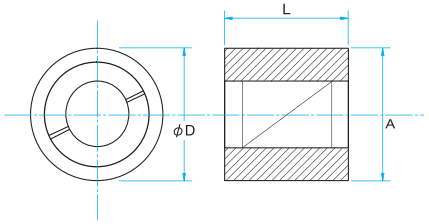
It is a prism for separating the incident beam into two linearly polarized beams with orthogonal polarizing orientation.
Used in the optical system of a phase-contrast microscope.

- Outgoing beam is emitted with deviation. In this case, the emitted beams are in opposite directions depending on the orientation of polarization.
- A single-layer anti-reflection coating has been applied on the surface of the Wollaston prism, a high transmittance is obtained.

Schematic



Outline Drawing (in mm)



●Tolerance
Diameter ϕD ±0.1
Length L ±0.1

Specifications

Material	α-BBO, Calcite
Beam Deviation	<3″
Surface Flatness	λ/4
Coating	MgF_2 Single-layer anti-reflection coating
Laser Damage Threshold	0.3J/cm² (Pulse duration 10ns)
Surface Quality (Scratch–Dig)	20–10
Material of metal frame	Aluminum Finishing: Black anodized

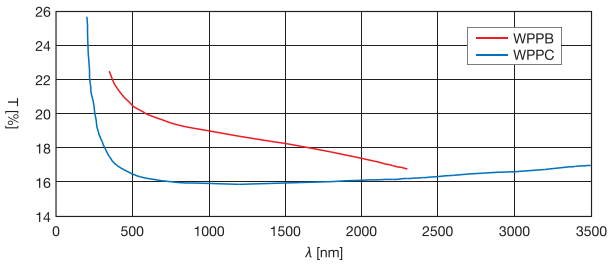
Guide

- Glan Thompson prism with wider acceptance angle (GTPA/GTPP) and Glan laser prism for high-power laser (GLPA/GLPC) 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 Wollaston 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.

Typical Transmittance Data T: Transmission



α-BBO

Part Number	Wavelength Range [nm]	Extinction ratio	Separation angle 190nm [°]	Separation angle 800nm [°]	Separation angle 2300nm [°]	A [mm]	ϕD×L
WPA-06-14SN	190 – 3500	$<5\times10^{-6}$	27	16	16	6	15×14
WPA-08-16SN	190 – 3500	$<5\times10^{-6}$	27	16	16	8	25.4×16
WPA-10-18SN	190 – 3500	$<5\times10^{-6}$	27	16	16	10	25.4×18
WPA-15-23SN	190 – 3500	$<5\times10^{-6}$	27	16	16	15	30×23
WPA-20-28SN	190 – 3500	$<5\times10^{-6}$	27	16	16	20	38×28

Calcite

Part Number	Wavelength Range [nm]	Extinction ratio	Separation angle 350nm [°]	Separation angle 980nm [°]	Separation angle 2300nm [°]	A [mm]	ϕD×L
WPC-06-14SN	350 – 2300	$<5\times10^{-5}$	22.5	19	16.7	6	15×14
WPC-08-16SN	350 – 2300	$<5\times10^{-5}$	22.5	19	16.7	8	25.4×16
WPC-10-18SN	350 – 2300	$<5\times10^{-5}$	22.5	19	16.7	10	25.4×18
WPC-15-23SN	350 – 2300	$<5\times10^{-5}$	22.5	19	16.7	15	30×23
WPC-20-28SN	350 – 2300	$<5\times10^{-5}$	22.5	19	16.7	20	38×28