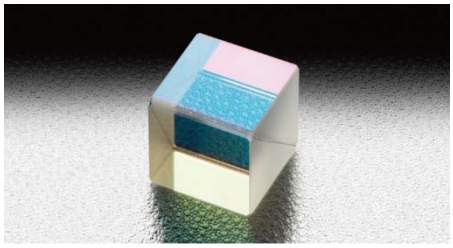
High Power Polarizing Beamsplitters | PBSHP/PBSHPQ

RoHS Catalog Code W3027

Polarization beam splitter specially designed for pulsed lasers such as Nd-YAG lasers and Yb lasers. High Power Polarizing Beamsplitters have more laser durability compared to our standard Polarizing Beamsplitters (PBS).

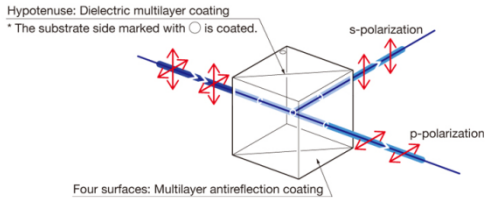
- Polarizing beamsplitters split a monochromatic beam entering at zero degrees into p-polarization as transmitted and s-polarization as reflected.
- Four surfaces of the cube are coated with narrowband multi-layer anti-reflection coating.
- The losses of input beam of these products are minimized because of no absorption resulting from the dielectric coating.
- For cube beamsplitters, unlike plate beamsplitters, beam deviations of transmitted beams and ghosts rarely occur.



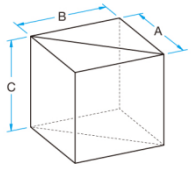
Common Specifications

Material	BK7 , Synthetic fused silica
Surface flatness of substrate	λ/4
Angular deviation of transmitted beam	＜10′
Coating	Hypotenuse surface ; Dielectric multilayer coating Four surfaces ; Multilayer antireflection coating
Incident angle	0°
Transmittance of P polarized light	＞97%
Extinction ratio of transmission	Ts：Tp＝1：200
Surface Quality (Scratch-Dig)	20-10
Clear aperture	Circle that inscribed in a square of 85% of the dimensions

Schematic



Outline Drawing (in mm)



●Tolerance
Length A·B±0.2
Height C±0.1

Guide

- Please contact our Sales Division for customized products. (Customized on size, wavelength etc.)
- There is also a high extinction ratio Glan-Thompson prism (GTPB/ GTPC). WEB Reference Catalog Code W3450

Attention

- Input beam from the prism on the side indicated by ○. When the light is incident from the side of the prism without mark, there is a possibility that the characteristics of the transmittance and extinction ratio will change.
- The surface flatness is the reflected wave front distortion of the surface before coating.
- Be sure to wear laser safety goggles when checking optical path and adjusting optical axis.

257nm～355nm

Part Number	Wavelength range [nm]	A＝B＝C [mm]	Material	Reflectance of S polarized light [%]	Laser Damage Threshold* [J/cm²]
PBSHP-10-2570 NEW	257	10	Synthetic fused silica	＞97	1.4
PBSHP-12.7-2570 NEW	257	12.7	Synthetic fused silica	＞97	1.4
PBSHP-15-2570 NEW	257	15	Synthetic fused silica	＞97	1.4
PBSHP-20-2570 NEW	257	20	Synthetic fused silica	＞97	1.4
PBSHP-10-3430 NEW	343	10	Synthetic fused silica	＞97	2
PBSHP-12.7-3430 NEW	343	12.7	Synthetic fused silica	＞97	2
PBSHP-15-3430 NEW	343	15	Synthetic fused silica	＞97	2
PBSHP-20-3430 NEW	343	20	Synthetic fused silica	＞97	2
PBSHP-10-3550	355	10	Synthetic fused silica	＞97	2
PBSHP-12.7-3550	355	12.7	Synthetic fused silica	＞97	2
PBSHP-15-3550	355	15	Synthetic fused silica	＞97	2
PBSHP-20-3550	355	20	Synthetic fused silica	＞97	2

*laser pulse width 10ns, Pulse Repetition-Rate：20Hz

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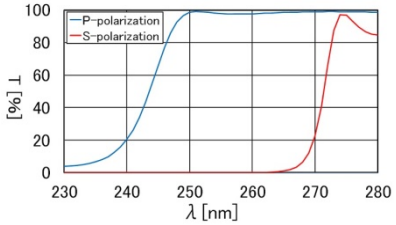
515nm～1064nm Part Number	Wavelength range [nm]	A＝B＝C [mm]	Material	Reflectance of S polarized light [%]	Laser Damage Threshold* [J/cm²]
PBSHPQ-10-5150 NEW	515	10	Synthetic fused silica	＞97	5
PBSHPQ-12.7-5150 NEW	515	12.7	Synthetic fused silica	＞97	5
PBSHPQ-15-5150 NEW	515	15	Synthetic fused silica	＞97	5
PBSHPQ-20-5150 NEW	515	20	Synthetic fused silica	＞97	5
PBSHP-10-5320	532	10	BK7	＞97	5
PBSHP-12.7-5320	532	12.7	BK7	＞97	5
PBSHP-15-5320	532	15	BK7	＞97	5
PBSHP-20-5320	532	20	BK7	＞97	5
PBSHPQ-10-10300 NEW	1030	10	Synthetic fused silica	＞97	7
PBSHPQ-12.7-10300 NEW	1030	12.7	Synthetic fused silica	＞97	7
PBSHPQ-15-10300 NEW	1030	15	Synthetic fused silica	＞97	7
PBSHPQ-20-10300 NEW	1030	20	Synthetic fused silica	＞97	7
PBSHP-10-10640	1064	10	BK7	＞97	7
PBSHP-12.7-10640	1064	12.7	BK7	＞97	7
PBSHP-15-10640	1064	15	BK7	＞97	7
PBSHP-20-10640	1064	20	BK7	＞97	7

*laser pulse width 10ns, Pulse Repetition-Rate : 20Hz

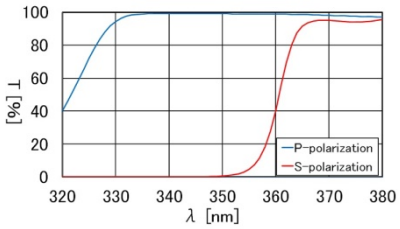
Typical Reflectance Data

R:Reflectance

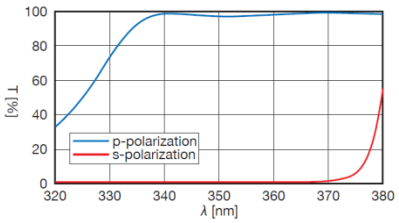
PBSHP-257



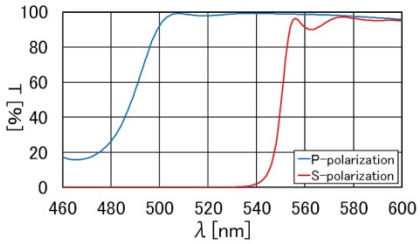
PBSHP-3430



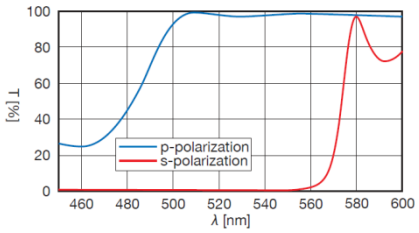
PBSHP-3550



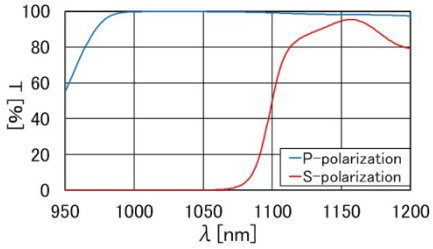
PBSHPQ-5150



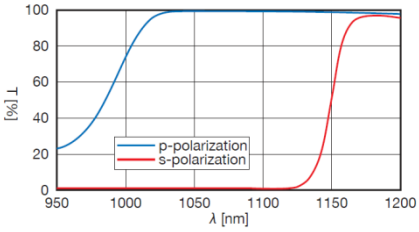
PBSHP-5320



PBSHPQ-10300



PBSHP-10640



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