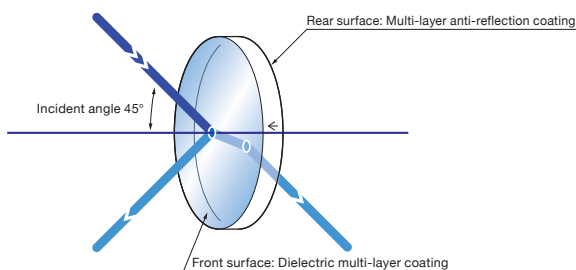


Plate-type beamsplitters are dielectric multi-layer coatings on a parallel plate or a wedge substrate. They are designed to divide beams at a reflected light (R) : transmission light (T) ratio of 1:2 or 1:3. The rear surface is coated with anti-reflection (AR).

- The dielectric multi-layer films have virtually zero light absorption and very low light intensity loss. However, transmittance and reflectance may vary according to wavelength, polarization and incident angles. Some deviation of the transmission optical path or ghosting may occur. To prevent ghosting, use wedge beamsplitters.

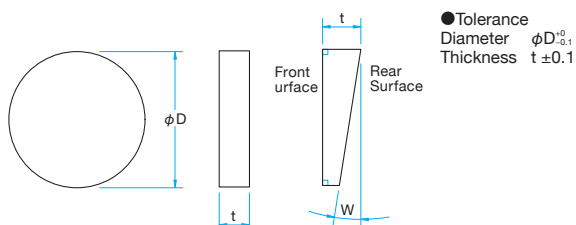


Schematic



Outline Drawing

(in mm)



Specifications

Material	BK7
Surface Flatness	$\lambda/10$
Coating	Front surface: Dielectric multi-layer coating Rear surface: Multi-layer anti-reflection coating
Wavelength Range	400 – 700nm
Incident angle	45°
Laser Damage Threshold	2.1J/cm ² (Laser pulse width 10ns, repetition frequency 20Hz)
Surface Quality (Scratch-Dig)	10-5
Clear aperture	90% of actual aperture

Guide

- ▶ Please contact our Sales Division for customized products. (Customized on size, wavelength or R:T, etc.) [Reference](#) B068
- ▶ For a guarantee in reflected wavefront error or transmitted wavefront error, please contact our Sales Division with your requests.
- ▶ Wedged types are marked with an arrow on the side of the substrate indicating the thickest point of the wedge.

Attention

- ▶ The transmission curve on the graph is based on actual measurements and may vary from different production lots.
- ▶ Surface flatness is the reflected wavefront distortion of the surface prior to coating.
- ▶ Compared to precision parallel plate type splitters, wedged substrate type beam splitters can prevent ghosting caused by rear surface reflection and significantly increase the displacement of the optical path.
- ▶ Dielectric multi-layer coated beamsplitters sometimes do not function effectively in specified R:T ratios. If this should occur, first check the polarization characteristics of the light source (laser). Do keep in mind that lasers used in the semiconductor field emit a linear polarized light.
- ▶ Use only non-polarized light or circular polarized light as incident light for dielectric multi-layer coated beam splitters. Using polarized light may result in R:T ratios that vary according to polarization components.

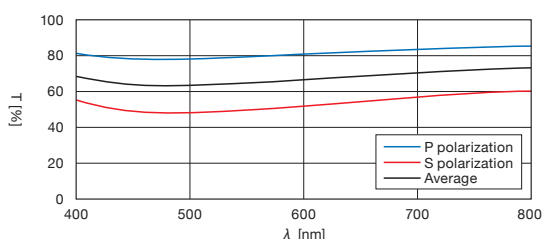
Specifications

Part Number	Reflectance : Transmittance	Diameter φD [mm]	Thickness t [mm]	Parallelism W	Transmittance at 550nm (The average value of the P-Polarization and the S-Polarization) [%]	Transmittance at 400-700nm (The average value of the P-Polarization and the S-Polarization) [%]
PSM33-25.4C03-10-550	1 : 2	φ25.4	3	<5"	67±3	<80
PSM33-30C03-10-550	1 : 2	φ30	3	<5"	67±3	<80
PSM33-30C05-10W-550	1 : 2	φ30	5	1°±5'	67±3	<80
PSM25-25.4C05-10-550	1 : 3	φ25.4	3	<5"	75±3	<90
PSM25-30C03-10-550	1 : 3	φ30	3	<5"	75±3	<90
PSM25-30C05-10W-550	1 : 3	φ30	5	1°±5'	75±3	<90

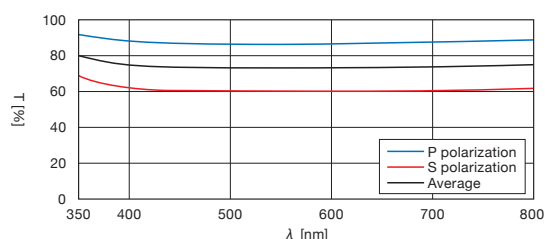
Typical Transmittance Data

T: Transmission

PSM33



PSM25



Compatible Optic Mounts

BHAN-30S / MHAN-25.4DS / MHG-MP25-NL, MP30-NL