

Beam Samplers | BS4

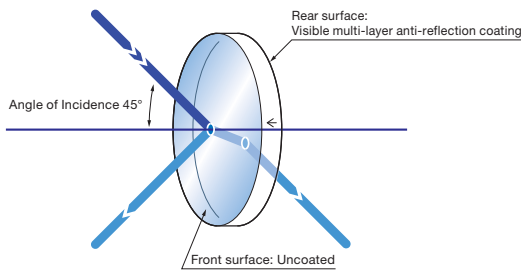
RoHS

A beam sampler behaves like a plate beamsplitter, it has the ability to reflect approximately 5.2% of the total beam.

- Uncoated surface of optical parallels or wedged substrates are used as reflection surfaces. The rear surfaces are coated with multi-layer anti-reflection.
- These products have transmitted beam deviation and ghosting of the rear surface reflections due to the characteristics of plate beamsplitters.
- Wedged beam samplers with AR coating on the rear surface should be selected to prevent ghosting.

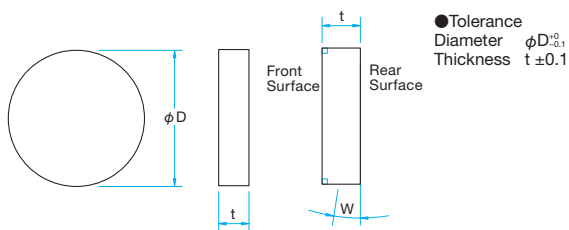


Schematic



Outline Drawing

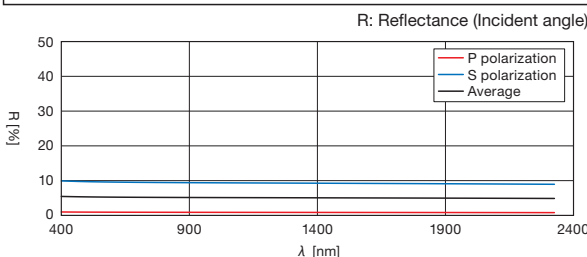
(in mm)



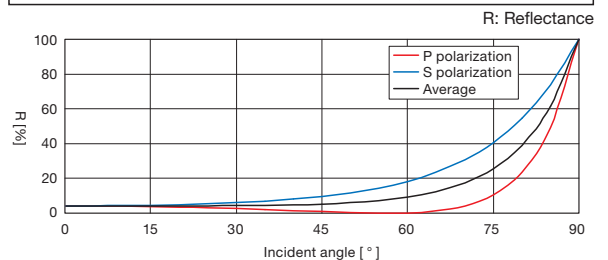
φ30·φ50

Part Number	Wavelength Range [nm]	Diameter φD [mm]	Thickness t [mm]	Parallelism W
BS4-25.4C03-10-550	400 - 700	φ25.4	3	<5"
BS4-30C03-10-550	400 - 700	φ30	3	<5"
BS4-30C05-10W-550	400 - 700	φ30	5	1°±5'
BS4-50C05-10-550	400 - 700	φ50	5	<5"
BS4-50C08-10W-550	400 - 700	φ50	8	1°±5'

Typical Reflectance Data (Calculated value)



Reflectivity change in accordance with incident angle (Calculated value)



Compatible Optic Mounts

BHAN-30S, -50S / MHG-MP25-NL, MP30-NL

Specifications

Material	BK7
Surface Flatness	$\lambda/10$
Coating	Front Surface: Uncoated Rear Surface: Visible multi-layer anti-reflection coating
Incident angle	45°
Divergence ratio (reflectance : transmittance)	5 : 95 (The average value of the P-Polarization and the S-Polarization)
Laser Damage Threshold	4J/cm ² (Laser pulse width 4ns, repetition frequency 20Hz)
Surface Quality (Scratch-Dig)	10-5
Clear aperture	90% of actual aperture

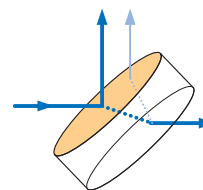
Guide

- ▶ Please contact our Sales Division for customized products. (Customized on size, wavelength or R:T, etc.)
- ▶ 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.

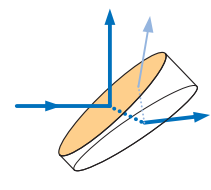
Attention

- ▶ The Beam Sampler has a reflectance of 5.2% when the material is BK7 and the input beam is unpolarized or circularly polarized.
- ▶ The transmitted beam deviation of a wedged beamsplitter is larger than with a beamsplitter made of an optical parallel.
- ▶ The amount of beam deviation of a beamsplitter depends on thickness of the substrate and the wavelength of the incident angle of the input beam.
- ▶ Be sure to wear laser safety goggles when checking optical path and adjusting optical axis.

Optical Parallel



Wedged Substrate



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Opto-Mechanics

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Half Mirror Cube

Half Mirror Plate

Application Note

Beamsplitters

Harmonic Separator

Beam Samplers

Others