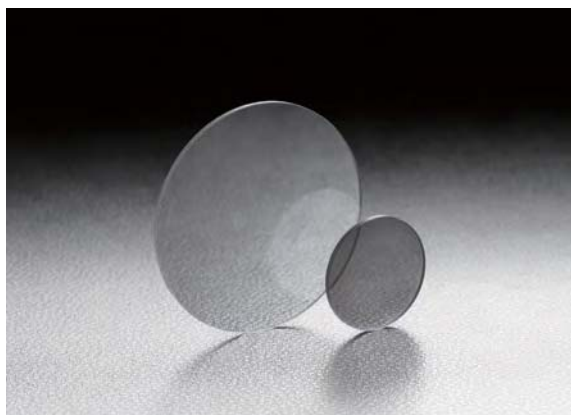


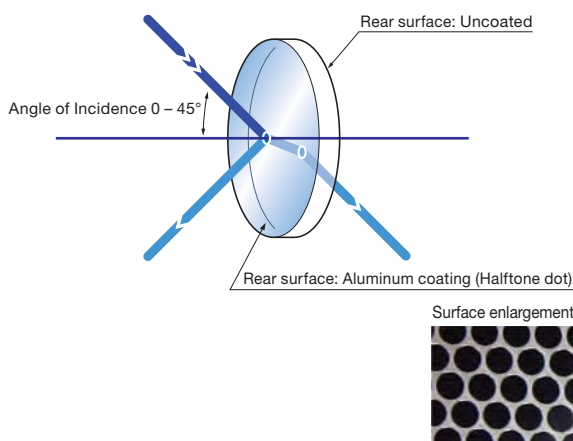
The polka dot beamsplitter is a beamsplitter that has aluminum coating of halftone dots (polka dots) on the glass substrate.

It has a low dependence on the incident angle and can be used in a wide range of wavelengths from ultraviolet region to the infrared region.

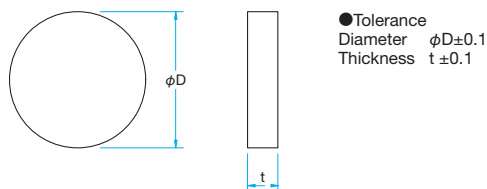
- Reflectance to transmittance ratio is manufactured by adjusting the area ratio of the points that have been coated.
- Unlike dielectric beamsplitters, the polka dot beamsplitter reflectance and transmittance ratio does not change as the incident angle changes.
- There are two sizes available  $\phi 25.4\text{mm}$  and  $\phi 50.8\text{mm}$  diameter and three types of reflectance to transmittance ratio, 7:3, 5:5 and 3:7.



### Schematic



### Outline Drawing



### Specifications

Material	Synthetic fused silica
Parallelism	<3'
Coating	Front Surface: Al+MgF <sub>2</sub> Rear Surface: Uncoated
Recommended angle of incidence	0 – 45°
Wavelength range	250 – 2200nm
Surface Quality (Scratch-Dig)	80-50
Dot pitch	0.3mm
Clear aperture	Circle except surrounding 1.5mm

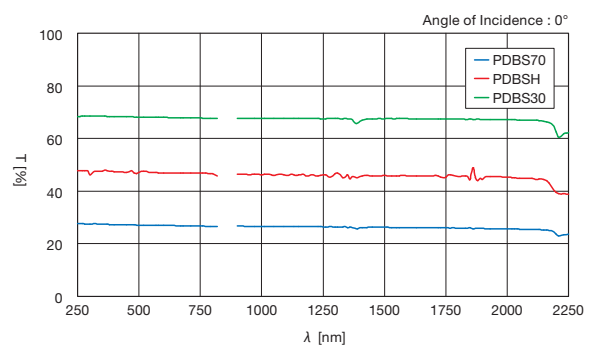
### Guide

- ▶ We also offer different sizes, wavelengths and ratios that are not listed on our website or in our catalog.

### Attention

- ▶ When used with a laser beam with high interference, diffraction occurs.
  - ▶ When light is incident, scattering light by the halftone dot occurs.
  - ▶ By the effect of the refractive index and the thickness of the substrate, the optical path of the transmitted light over the incident light will move by 0.5 extent parallel.
  - ▶ When the incident beam diameter is very thin, it is not possible to separate into the split ratio.
  - ▶ Do not clean with water or solvents. It may cause surface deterioration.
  - ▶ Please use in the environments which are non-condensing and less dust.
- If the dust or dirt is deposited, please do not blow but blow it off gently with dried air.

### Typical Transmittance Data



### Specifications

Part Number	Reflectance : Transmittance	Diameter $\phi D$ [mm]	Thickness $t$ [mm]	Transmission (Wavelength Range 555nm, Angle of Incidence : 0°) [%]
PDBS70-25.4C1.5	70 : 30	$\phi 25.4$	1.5	30%
PDBS70-50.8C1.5	70 : 30	$\phi 50.8$	1.5	30%
PDBSH-25.4C1.5	50 : 50	$\phi 25.4$	1.5	50%
PDBSH-50.8C1.5	50 : 50	$\phi 50.8$	1.5	50%
PDBS30-25.4C1.5	30 : 70	$\phi 25.4$	1.5	70%
PDBS30-50.8C1.5	30 : 70	$\phi 50.8$	1.5	70%

### Compatible Optic Mounts

P25-NL, MP50.8-NL / MHAN-25.4S, -50.8S

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