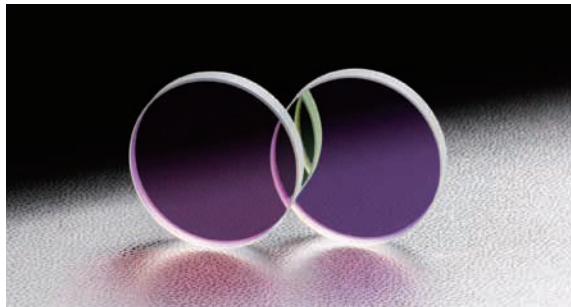


# Dielectric Plate Beamsplitters | DPB

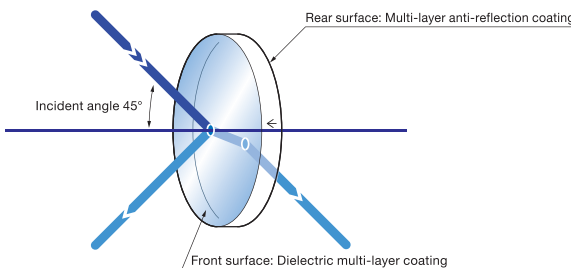


**Plate-type beam splitters with a dielectric multi-layer coat on a parallel plate and a wedge substrate. Divides beams at a reflected light (R) : transmission light (T) ratio of 1:2 or 1:3. The rear surface is coated with anti-reflection (AR).**

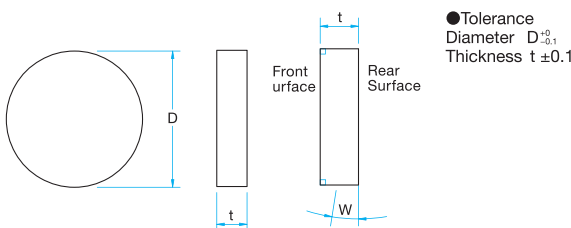
- The dielectric multi-layer films has virtually zero light absorption and very low light intensity loss. However, transmittance and reflectance may change according to wavelength, polarization and incident angles. A higher reflectance will occur from a higher dependence. Some deviation of the transmission optical path or ghosting may occur. To prevent ghosting, use wedge substrate type of beam splitters.



### 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 <sup>2</sup> (Laser pulse width 10ns, repetition frequency 20Hz)
Surface Quality (Scratch-Dig)	10-5
Clear aperture	90% of actual aperture

### Guide

- ▶ Please contact our International Sales Division for customized products. (Customized on size, wavelength or R:T, etc.) **Reference** C063
- ▶ For a guarantee in reflected wavefront error or transmitted wavefront error, please contact our International Sales Division.
- ▶ Wedge type substrates have a thickness direction arrow that is marked on most surfaces.

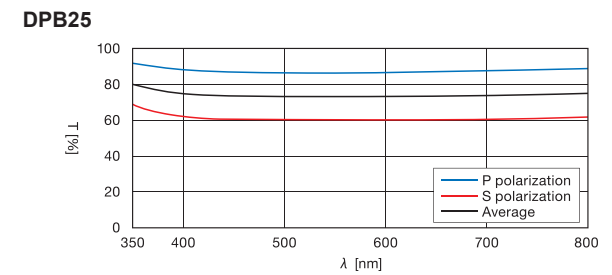
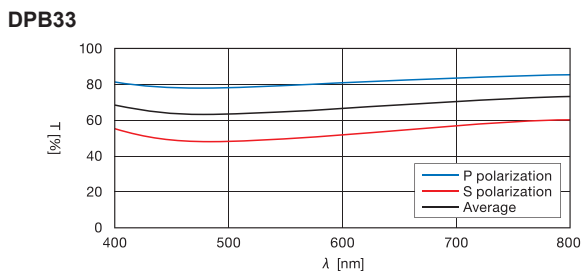
### Attention

- ▶ 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 beam splitters sometimes do not function effectively in specified division ratios. During such case, first check the polarization characteristics of the light source (laser). Do keep in mind that lasers used for 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 different division ratios due to the various polarization components used.

### Specifications

Part Number	Reflectance : Transmittance	Diameter D [mm]	Thickness t [mm]	Parallelism	Transmittance at 550nm [%]	Transmittance at 400-700nm [%]
DPB33-30C03-10-550	1 : 2	φ30	3	<5'	67±3	<80
DPB33-30C05-10W-550	1 : 2	φ30	5	1°±5'	67±3	<80
DPB25-30C03-10-550	1 : 3	φ30	3	<5'	75±3	<90
DPB25-30C05-10W-550	1 : 3	φ30	5	1°±5'	75±3	<90

### Typical Transmittance Data



### Compatible Optic Mounts

GBH-30S / KMH-MP30-NL

- 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