NEW Thin Plate Beamsplitter | TPB

RoHS

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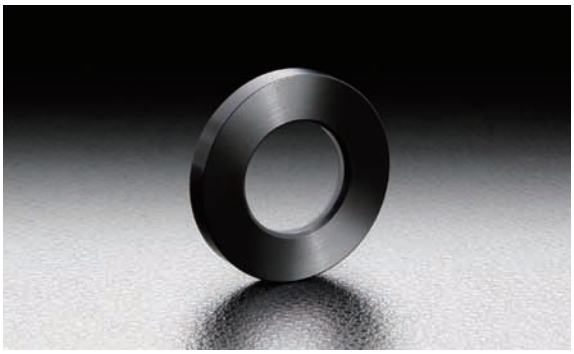
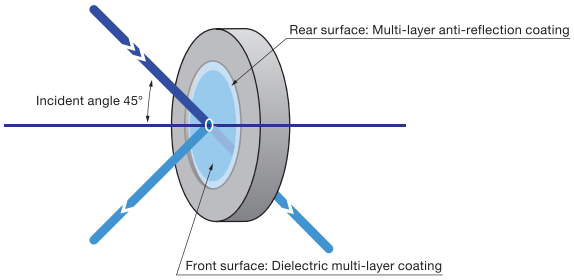
Extremely thin beamsplitter.
It can be inserted into an optical light path without any beam swift or chromatic dispersion for any light transmittance application.

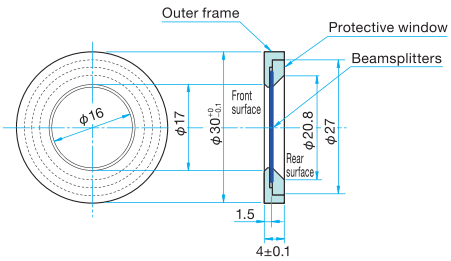
- 2 choices of thickness, 300um and 90um.
- Dielectric multi-layer optical coating with reflectance and transmittance ratios at 1:1
- Dielectric multi-layer optical coating on the surface and AR coating on the rear to provide a mirror with no loss of power.
- The plate if firmly held by a glass retainer to avoid thermal expansion.
- Because of our fabrication method, it offers good durability and high resistance against vibration and with our traditional and proven optical polishing process on silica quartz which is different from a pellicle.



Schematic



Outline Drawing (in mm)



Specifications

Material	Synthetic fused silica
Coating	Front surface: Dielectric multi-layer coating Rear surface (45 degrees taper hole): Multi-layer anti-reflection coating
Incident angle	45°
Transmittance	Average 50±5% (The average value of the P-Polarization and the S-Polarization)
Divergence ratio (reflectance : transmittance)	1 : 1
Surface Quality (Scratch–Dig)	40–20
Clear aperture	ϕ10mm
Material propreties	Protective window: Synthetic fused silica Outer frame: Aluminum Finishing: Matt black almite

Guide

- For customization, we can offer different sizes, wavelengths and deviation ratios. Reference C063
  Please contact our International Sales Division.

Attention

- Thin beamsplitters are extremely thin and fragile. Special care must be taken during cleaning and handling.
- When removing dust from the surface, do not use optics tissue paper to clean. Use a compress gas spray instead.
- When applying a laser linear polarized light, the direction of polarization may affect the rates of reflectance and transmittance. For a rigorous divergence usage of 1:1 ratio, ensure the direction of polarization is set to 45 degrees or use a circular polarizer.
- The transmittance wavelength properties may be different if the incident angle is other than 45 degrees.
- Avoid pushing the glass retainer as the mirror can bend or break. When handling, please use the other metal frame.
- The surface reflectance accuracy may deteriorate when used outside recommended operating temperature.
- The phase difference of incident light cannot be preserved on light transmittance and reflectance. Please use a wave plate to compensate.

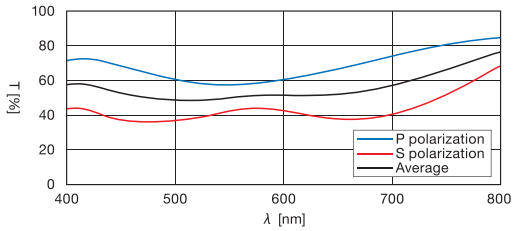
Specifications

Part Number	Wavelength Range [nm]	Optics Thickness [mm]	Surface Accuracy after coating
TPB-30C0.3-1-550	400 – 700	0.3±0.03	Reflectance: λ Transmittance: λ
TPB-30C0.09-1-550	400 – 700	0.09±0.01	Reflectance: Polishing Transmittance: Polishing

Typical Transmittance Data

T: Transmission

Visible (400 – 700nm)



Compatible Optic Mounts

KMH-HS30-NL /GBH-30S