

## Thin Plate Beamsplitter | MPSMH

RoHS

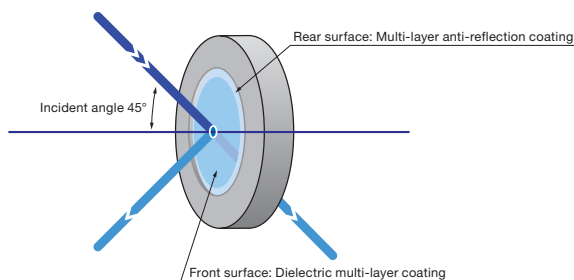
## Extremely thin beamsplitter.

It can be inserted into an optical light path without any beam shift or chromatic dispersion for any light transmittance application.

- We offer 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 front surface and AR coating on the rear surface to provide a mirror with no loss of power.
- Due to the fabrication method, these offer good durability and high resistance against vibration making them an excellent alternative to traditional pellicle beamsplitters.

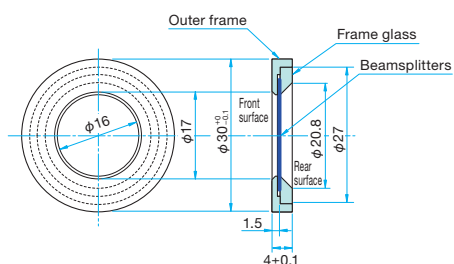


## Schematic



## Outline Drawing

(in mm)



## Specifications

| Part Number         | Wavelength Range [nm] | Optics Thickness [mm] | Surface flatness after coating                     |
|---------------------|-----------------------|-----------------------|----------------------------------------------------|
| MPSMH-30C0.3-1-550  | 400 - 700             | 0.3±0.03              | Reflectance: $\lambda$ Transmittance: $\lambda$    |
| MPSMH-30C0.09-1-550 | 400 - 700             | 0.09±0.01             | Reflectance: Polishing<br>Transmittance: Polishing |

## Specifications

|                                                |                                                                                                                   |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Material                                       | Synthetic fused silica                                                                                            |
| Coating                                        | Front surface: Dielectric multi-layer coating<br>Rear surface (45 degrees taper hole):<br>Anti-reflection coating |
| Incident angle                                 | 45°                                                                                                               |
| Transmittance                                  | Average 50±5%<br>(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                                 | $\phi$ 10mm                                                                                                       |
| Frame specification                            | Frame glass: Synthetic fused silica<br>Outer frame: Aluminum<br>Finishing: Matt black almite                      |

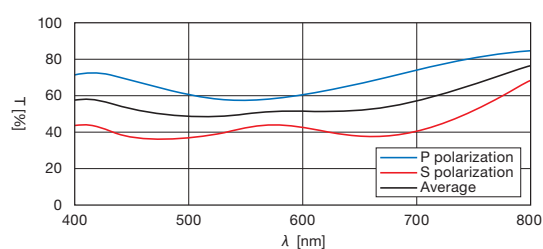
## Guide

- ▶ For customization, we can offer different sizes, wavelengths and deviation ratios. Please contact our Sales Division with your requests.

## 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 amount of reflectance and transmittance. For 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.

## Typical Transmittance Data T: Transmission



## Compatible Optic Mounts

MHG-HS30-NL / BHAN-30S