# Penta Prisms
# Brewster dispersing littrow type prism

PPBP
Custom-made

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RoHS

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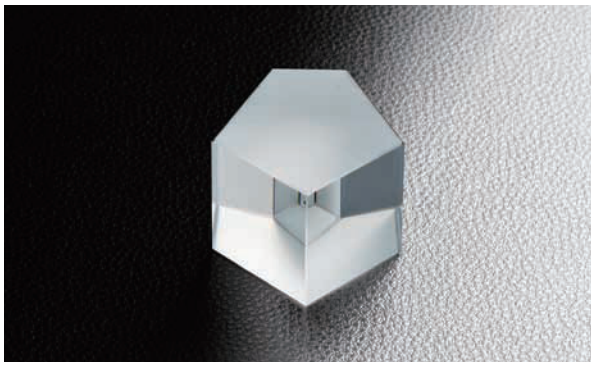
## PPBP

**By reflecting twice in the mirror, it converts the image of the same object and erect a reflection image of mirror symmetry. To avoid the image mirror symmetry, digitized before the camera, the light rays are bent at a right angle from the object using a penta prism. It is also used as the basis of the device perpendicular by the laser positioning marking.**

- The incident angle of the prism is changed, then always emitted at 90 degrees for the incident light.
- You can compact the whole better to use the internal reflection prism than using two mirrors of the angle deviation is not generated.



### Specifications

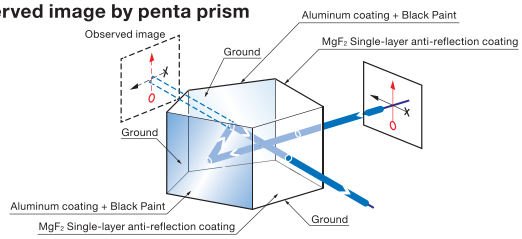
| | |
|---|---|
| Material | BK7 |
| Surface flatness of substrate | λ/4 |
| Angle tolerance | ±3′ |
| Surface Quality (Scratch–Dig) | 40–20 |
| Coating | Aluminum coating + Black Paint<br>$MgF_2$ Single-layer anti-reflection coating |
| Clear aperture | Circle inscribed in a square of 90% of the dimensions A |

### Attention

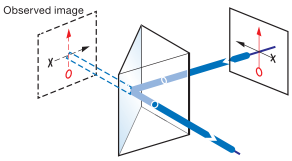
- There is a possibility to take the black ink will melt if wiped with a solvent.
- There is a loss with Aluminum coating of about 12% in the single-side, and 23% in both side reflectance internal reflection of prism. Input and output efficiency will be about 77%.

### Schematic

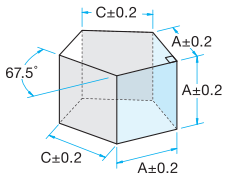
**Observed image by penta prism**




**Observed image by right-angle prism (for mirror)**




### Outline Drawing (in mm)




Chamfer Ridge line
C0.2 – C0.3
(No chamfer obtuse angle)

### Specifications

| Part Number | A [mm] | C [mm] |
|---|---|---|
| PPBP-10-4 | 10 | 10.8 |
| PPBP-15-4 | 15 | 16.0 |
| PPBP-20-4 | 20 | 23.0 |
| PPBP-25-4 | 25 | 27.1 |

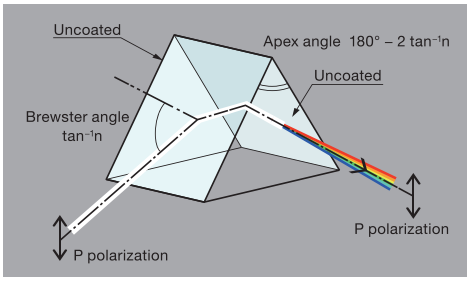
## Custom-made

**This is the incident angle of the prism apex angle of the prism was adjusted so that the dispersion was Brewster angle p-polarized light reflection angle is zero. It can be used as the wavelength selection prism used in the tunable laser resonator.**

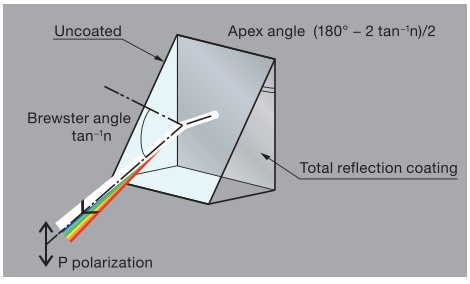
- If linearly polarized light (polarized light P), is suppressed by the reflection loss for both the incident surface and the exit surface, the incident beam has a high transmission efficiency can be obtained.
- Brewster angle are computed from the refractive index with wavelength and use of glass material, it must be always specified wavelength and using glass materials.
- Brewster prism dispersion is coated littrow type to total reflection and transmission type.
- When ordering, please use the Contact sheet in the catalog for the custom prism.

### Schematic

**Transparent type**




**Littrow type**




### Compatible Optic Mounts

PH / SH