

## 14DOP Dove Prisms

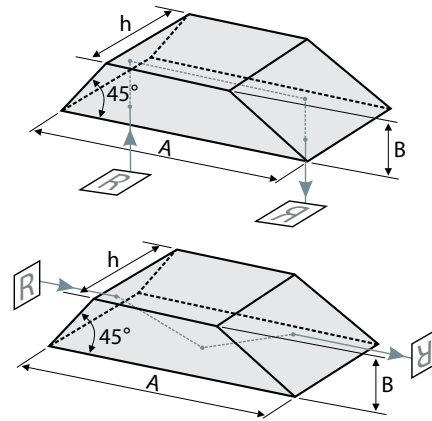
Dove prism is a type of reflective prism which is used to invert an image. Dove prisms are shaped from a truncated right-angle prism. A beam of light entering one of the sloped faces of the prism undergoes total internal reflection from the inside of the longest (bottom) face and emerges from the opposite sloped face. Images passing through the prism are flipped, and because only one reflection takes place, the image's handedness is changed to the opposite sense. Dove prisms have an interesting property that when they are rotated along their longitudinal axis, the transmitted image rotates at twice the rate of the prism. It is very important that the application must be used with parallel or collimated beam and the large square reflective surface should be kept very clean. Another application is used as a retroreflector. For this application it performs as a right-angle prism.

### STANDARD SPECIFICATIONS

Material	BK7, UVFS
Dimension Tolerances	+0.0, -0.2 mm
Angle Tolerance	<3 arcmin
Surface Flatness	< $\lambda/2$ @ 632.8 nm
Surface Quality	60-40 scratch & dig
Dimension Tolerance	$\pm 0.2$ mm
Clear Aperture	>80%

### DOVE PRISMS

Material	Dimensions A x B x h, mm	Coating	Ordering Code
BK7	21.1 x 5.0 x 5.0	Uncoated	<b>14DOP-1-1</b>
	42.3 x 10.0 x 10.0	Uncoated	<b>14DOP-2-1</b>
UVFS	21.1 x 5.0 x 5.0	Uncoated	<b>14DOP-1-2</b>



### FEATURES

- Ideal for Image rotation
- Various dielectric coatings available upon request

### CODE EXAMPLE FOR ORDERING

## 14DOP-1-1

Dimensions (AxBxh)  
1 – 21.1x5.0x5.0 mm  
2 – 42.3x10.0x10.0 mm

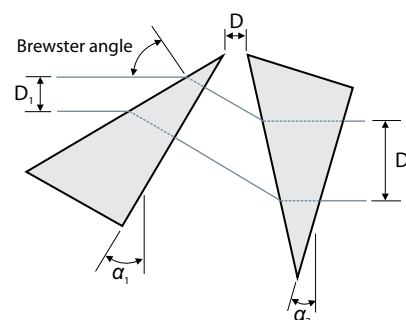
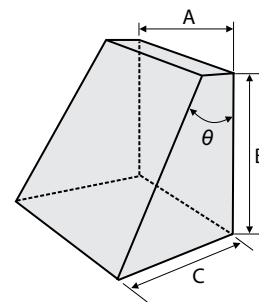
Material  
1 – BK7  
2 – UVFS

## 14AP Anamorphic Prisms

Anamorphic prisms are used to change the dimension of a beam in one axis, the effect being analogous to that of a cylindrical lens. These two prisms can expand or contract the beam in one direction without any changes in the other direction. By adjusting the angles among the incident beam and two prisms, the shape of the beam can be changed. It is very easy to turn elliptical beam into circular beam. If beam shaping is required, a system using a pair of anamorphic prisms has several significant benefits.

### FEATURES

- A pair of prisms can be designed into a much more compact package than a telescope using cylindrical optics
- The ability of adjusting the position of the prisms allows the user to compensate for variations from one light source to another
- The prisms are more cost effective than cylindrical lenses of comparable quality
- Mount for anamorphic prisms is available upon request



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CODE EXAMPLE FOR ORDERING

**14AP-1-1**

Dimensions (AxBxC)  
1 – 12.0x12.0x8.5 mm

Coating  
0 – Uncoated  
1 – MgF<sub>2</sub> single layer

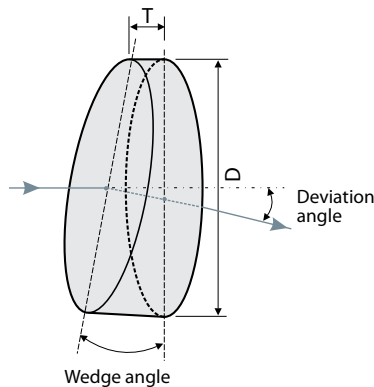
STANDARD SPECIFICATIONS

Material	SF11
Dimension Tolerances	+0.0, -0.2 mm
Surface Flatness	<math>\lambda/8 @ 632.8 \text{ nm}</math>
Surface Quality	60-40 scratch & dig
Theta Angle	29°27' ± 3"
Clear Aperture	> 85% in central circular dimension
Coating	MgF <sub>2</sub> single layer on perpendicular surface

SF11 ANAMORPHIC PRISMS

Dimensions A x B x C, mm	Coating	Ordering Code
12.0 x 12.0 x 8.5	Uncoated	<b>14AP-1-0</b>
	MgF <sub>2</sub> single layer on perpendicular surface	<b>14AP-1-1</b>

**14WP** Wedge Prisms



Wedge prism is an optical element with plane-inclined surfaces; usually the faces are inclined toward one another at very small angles. It diverts light toward its thicker portion. By selecting the appropriate wedge it is simple to create a precise beam deviation without affecting other beam parameters. If two wedges are used together with the sloping surfaces in close proximity it is possible to produce a continuous variation of beam deviation by counter – rotating the wedges.

- FEATURES**
- Ideal for beam steering

CODE EXAMPLE FOR ORDERING

**14WP-1-1-1**

Dimensions (DxT)  
1 – 25.4x3.0 mm

Wedge Angle  
05 – 0.5°  
1 – 1°  
3 – 3°

Material  
1 – BK7  
2 – UVFS

STANDARD SPECIFICATIONS

Material	BK7, UVFS
Dimensions D x T, mm	25.4 x 3
Dimension Tolerances	+0.0, -0.2 mm
Wedge Angle	0.5°, 1°, 3°
Surface Quality	40-20 scratch & dig
Clear Aperture	90% of the diameter
Wedge Tolerance	±3 arcmin
Flatness	$\lambda/4 @ 632.8 \text{ nm}$
Bevel	0.25 mm x 45 deg

WEDGE PRISMS

Material	Dimensions D x T, mm	Wedge angle, deg	Coating	Ordering Code
BK7	25.4 x 3	0.5	Uncoated	<b>14WP-1-05-1</b>
		1	Uncoated	<b>14WP-1-1-1</b>
		2	Uncoated	<b>14WP-1-2-1</b>
		3	Uncoated	<b>14WP-1-3-1</b>
		5	Uncoated	<b>14WP-1-5-1</b>
UVFS	25.4 x 3	0.5	Uncoated	<b>14WP-1-05-2</b>
		1	Uncoated	<b>14WP-1-1-2</b>
		2	Uncoated	<b>14WP-1-2-2</b>
		3	Uncoated	<b>14WP-1-3-2</b>
		5	Uncoated	<b>14WP-1-5-2</b>

**RELATED PRODUCTS AND ACCESSORIES**

- **5KVDOM-1** – Kinematic Vertical Drive Optical Mount
- **5MBM24-1-3** – Kinematic Mirror/ Beamsplitter Mount

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