



Optical Components:
Prisms

Table of Contents...

Right Angle Prism:	2
Penta Prism	3
Retroreflector	4
Roof Prism	5
Dove Prism	5
Dispersion Prism	6
Narrow Band Beamsplitter	7
Broadband Beamsplitter Cube	8

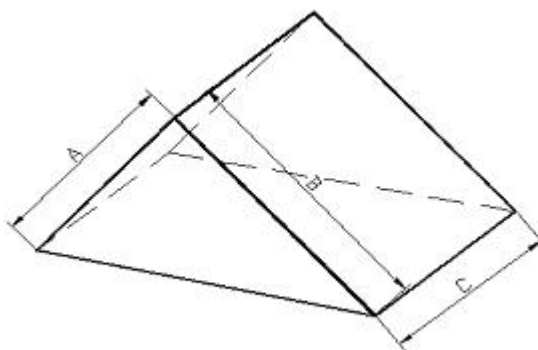
Right Angle Prism:

Specifications:

Material: BK7 grade A
 Dimension Tolerance: $\pm 0.1\text{mm}$
 Clear Aperture: 80% Dimensions
 Surface Quality: 60-40 or 20-10
 Surface Flatness: $\lambda/8$ or $\lambda/4$ @ 633nm
 Angle Tolerance: see table
 Bevel: $0.3\text{mm} \pm 0.1\text{mm}$



- Fused Silica material is available
- High precision for laser system
- Other material is available if required
- Coating available if required



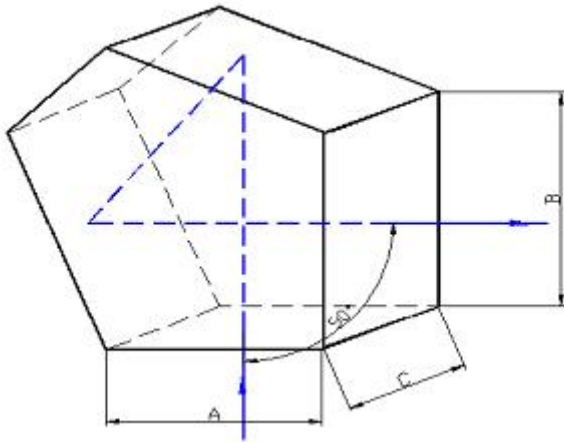
Part Number	A = B = C	Surface Quality	Flatness	Angle Tolerance
PRA1110	10.0mm	60-40	$\lambda/2$	< 3 arc mins
PRA1112	12.7mm	60-40	$\lambda/2$	< 3 arc mins
PRA1115	15.0mm	60-40	$\lambda/2$	< 3 arc mins
PRA1120	20.0mm	60-40	$\lambda/2$	< 3 arc mins
PRA1125	25.4mm	60-40	$\lambda/2$	< 3 arc mins
PRA1150	50.8mm	60-40	$\lambda/2$	< 3 arc mins

Part Number	A = B = C	Surface Quality	Flatness	Angle Tolerance
PRA1203	3.2mm	20-10	$\lambda/8$	< 30 arc seconds
PRA1205	5.0mm	20-10	$\lambda/8$	< 30 arc seconds
PRA1210	10.0mm	20-10	$\lambda/8$	< 30 arc seconds
PRA1212	12.7mm	20-10	$\lambda/8$	< 30 arc seconds
PRA1215	15.0mm	20-10	$\lambda/8$	< 30 arc seconds
PRA1220	20.0mm	20-10	$\lambda/8$	< 30 arc seconds
PRA1225	25.4mm	20-10	$\lambda/8$	< 30 arc seconds
PRA1250	50.8mm	20-10	$\lambda/8$	< 30 arc seconds

Penta Prism

Specifications:

Material: BK7 grade A
 Dimension Tolerance: $\pm 0.1\text{mm}$
 Clear Aperture: 80% Dimensions
 Surface Quality: 60-40
 Surface Flatness: $\lambda/4 @ 633\text{nm}$
 Angle Tolerance: Up to 10 seconds
 Coating: Aluminized and black paint overcoat
 Bevel: $0.3\text{mm} \pm 0.1\text{mm}$



A = B = C	< 30 Second Deviation	< 10 Second Deviation
10.0mm	PPT1110	PPT1210
12.7mm	PPT1112	PPT1212
15.0mm	PPT1115	PPT1215
20.0mm	PPT1120	PPT1220
25.4mm	PPT1125	PPT1225
40.0mm	PPT1140	PPT1240

Part Number Information

PPT	1	1	25
Part Number	Material	Precision Serial	Size

Retroreflector

Specifications:

Material: BK7 grade A

Dimension Tolerance: $\pm 0.1\text{mm}$

Clear Aperture: 80% Dimensions

Surface Quality: 60-40

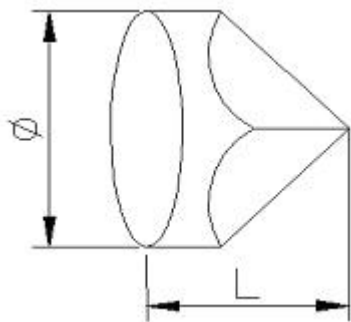
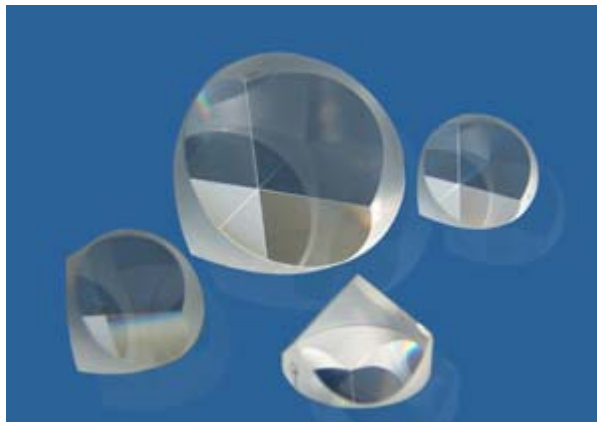
Surface Flatness: $\lambda/4$ @ 633nm for big surfaces

Surface Flatness: $\lambda/4$ @ 633nm for other surfaces

Angle Tolerance: $180^\circ \pm 5$ arc seconds

Coating: Aluminized and black paint on small surfaces

Bevel: $0.3\text{mm} \pm 0.1\text{mm}$

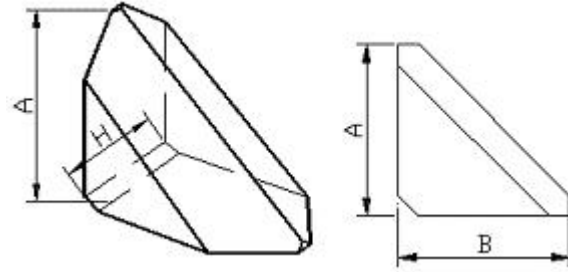


Part Number	Diameter	L
PER1115	15.0mm	11.3mm
PER1125	25.4mm	19.0mm
PER1130	38.0mm	28.5mm
PER1150	50.8mm	37.5mm

Roof Prism

Specifications:

Material: BK7 grade A
 Dimension Tolerance: $\pm 0.1\text{mm}$
 Clear Aperture: 80% Dimensions
 Surface Quality: 60-40
 Surface Flatness: $\lambda/4 @ 633\text{nm}$
 Angle Tolerance: $\pm 3 \text{ arc min}$
 Bevel: $0.3\text{mm} \pm 0.1\text{mm}$

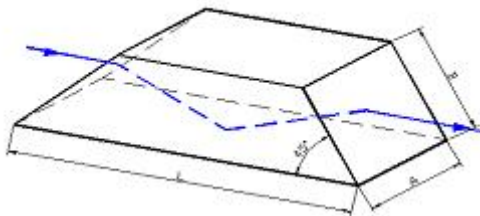
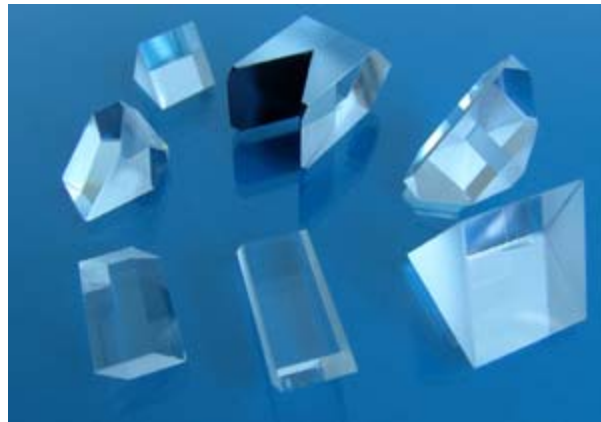


Part Number	A = B	H
PRF1110	15.0mm	12.0mm
PRF1115	23.0mm	18.0mm
PRF1120	31.5mm	23.0mm

Dove Prism

Specifications:

Material: BK7 grade A
 Dimension Tolerance: $\pm 0.1\text{mm}$
 Clear Aperture: 80% Dimensions
 Surface Quality: 60-40
 Surface Flatness: $\lambda/4 @ 633\text{nm}$
 Angle Tolerance: $\pm 3 \text{ arc min}$
 Bevel: $0.3\text{mm} \pm 0.1\text{mm}$

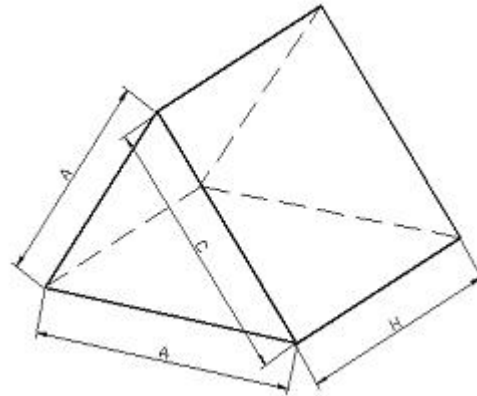


Part Number	A	B	L
PDV1105	5.0mm	7.07mm	21.14mm
PDV1110	10.0mm	14.14mm	42.28mm
PDV1115	15.0mm	21.21mm	63.41mm
PDV1120	20.0mm	42.43mm	84.55mm

Dispersion Prism

Specifications:

Material: BK7 grade A
 Dimension Tolerance: $\pm 0.1\text{mm}$
 Clear Aperture: 80% Dimensions
 Surface Quality: 60-40
 Surface Flatness: $\lambda/4 @ 633\text{nm}$
 Angle Tolerance: $60^\circ \pm 3 \text{ arc min}$
 Bevel: $0.3\text{mm} \pm 0.1\text{mm}$



Part Number	Material	A = B = C = H
PDP1115	BK7	15.0mm
PDP1125	BK7	25.0mm
PDP1140	BK7	40.0mm
PDP1015	F ₂	15.0mm
PDP1025	F ₂	25.0mm
PDP1040	F ₂	40.0mm

Narrow Band Beamsplitter

Specifications:

Material: BK7 grade A Optical Glass

Dimension Tolerance: $\pm 0.2\text{mm}$

Surface Quality: 60-40 scratch and dig

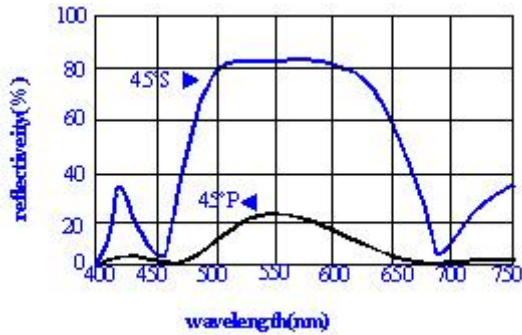
T/R: $50/50 \pm 5\%$ for natural light

$$T = (T_s + T_p)/2, R = (R_s + R_p)/2$$

Surface Flatness: $1/4 @ 632.8\text{nm}$

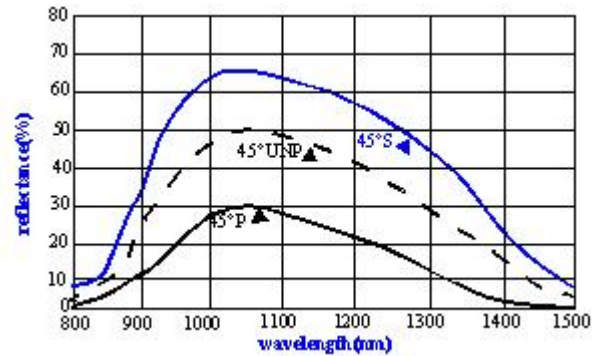
Beam Deviation: < 3 arc minutes

Coatings: Single wavelength partial
reflectance on hypotenuse face "V"
AR-coatings on all input and output
faces



$$R = 50.0\% \pm 2.0\% @ 632.8\text{nm}$$

$$R = (R_s + R_p)/2$$



$$R = 50.0\% \pm 2.0\% @ 1064\text{nm}$$

$$R = (R_s + R_p)/2$$

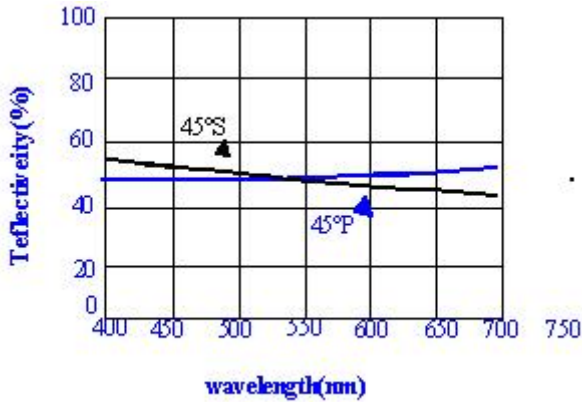
Wavelength (nm): 488,514,532,632,780,850,980,1064,1310,1550

Part Number	CBS1010	CBS1012	CBS1015	CBS1020	CBS1025
Dimensions (mm ³)	10x10x10	12.7x12.7x12.7	15x15x15	20x20x20	25.4x25.4x25.4

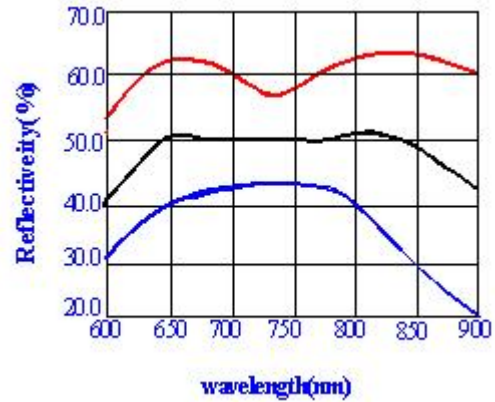
Broadband Beamsplitter Cube

Specifications:

Material: BK7 grade A Optical Glass
 Dimension Tolerance: $\pm 0.2\text{mm}$
 Surface Quality: 60-40 scratch and dig
 T/R: $50/50 \pm 5\%$ for natural light
 $T = (T_s + T_p)/2$, $R = (R_s + R_p)/2$
 Surface Flatness: $1/4 @ 632.8\text{nm}$
 Beam Deviation: < 3 arc minutes



Non Polarization Beamsplitter



Random Broadband Beamsplitter
 $R = 50.0\% \pm 5.0\% @ 650-900\text{nm}$

Dimensions: $10 \times 10 \times 10 \text{ (mm}^3\text{)}$

Wavelength (nm)	450-650	650-900	900-1200	1200-1550
Part Number	CBS1110	CBS1210	CBS1310	CBS1410

Dimensions: $12.7 \times 12.7 \times 12.7 \text{ (mm}^3\text{)}$

Wavelength (nm)	450-650	650-900	900-1200	1200-1550
Part Number	CBS1112	CBS1212	CBS1312	CBS1412

Dimensions: 15x15x15 (mm³)

Wavelength (nm)	450-650	650-900	900-1200	1200-1550
Part Number	CBS1115	CBS1215	CBS1315	CBS1415

Dimensions: 20x20x20 (mm³)

Wavelength (nm)	450-650	650-900	900-1200	1200-1550
Part Number	CBS1120	CBS1220	CBS1320	CBS1420

Dimensions: 25.4x25.4x25.4 (mm³)

Wavelength (nm)	450-650	650-900	900-1200	1200-1550
Part Number	CBS1125	CBS1225	CBS1325	CBS1425