



# ***OPTICS CATALOGUE***

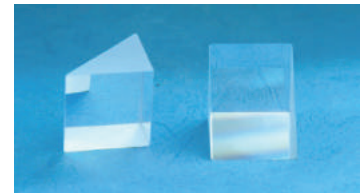
**(2017-2018)**



## Right Angle Prisms

### Specifications

<b>Material:</b>	BK7 or UV fused silica
<b>Flatness:</b>	$\lambda / 4 @ 632.8\text{nm}$
<b>Surface Quality:</b>	40 / 20 scratch / dig
<b>Beam Deviation:</b>	<3 arc min
<b>Dimension Tolerance:</b>	+0/-0.25
<b>Clear Aperture:</b>	>central 85% of dimension
<b>Chamfers:</b>	0.25-0.5mm face width (typical) x $45^\circ \pm 15^\circ$



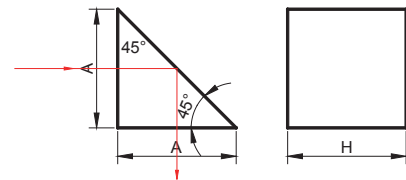
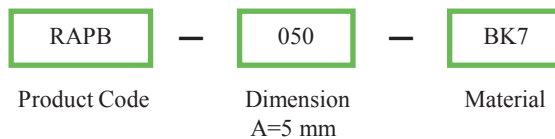
### Right Angle Prisms

- Total internal reflection prisms
- $90^\circ$  or  $180^\circ$  beam deflection, depending on which surface is used as the input for the light source

### Right Angle Bending Prisms, Uncoated

- $90^\circ$  reflectors

### Order Information



### Right Angle Bending Prisms, Uncoated

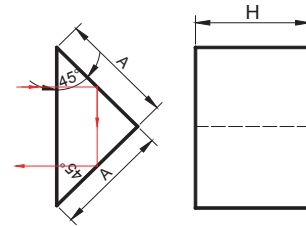
Part Number	Dimension A=H(mm)	Material
RAPB-127-BK7	12.7	BK7
RAPB-254-BK7	25.4	BK7
RAPB-127-UVFS	12.7	UVFS
RAPB-254-UVFS	25.4	UVFS

- Our Right Angle Bending Prisms are also available with antireflection coatings on both legs in order to reduce surfaces loss.
- Coating specifications, please see page 2-3.
- Other sizes and coatings are available upon request.

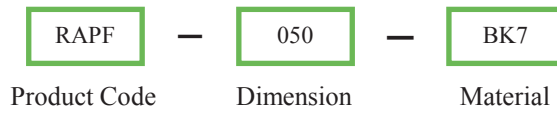
**Example :** The hypotenuse may be coated with second-surface aluminum protected by black sealing paint to ensure grazing incidence reflection. These prisms are suitable for optical delay lines and for high power use.

**Right Angle Folding Prisms, Uncoated**

- 180° reflectors



**Order Information**



**Right Angle Folding Prisms, Uncoated**

Part Number	Dimension A=H (mm)	Material
RAPF-127-BK7	12.7	BK7
RAPF-254-BK7	25.4	BK7
RAPF-127-UVFS	12.7	UVFS
RAPF-254-UVFS	25.4	UVFS

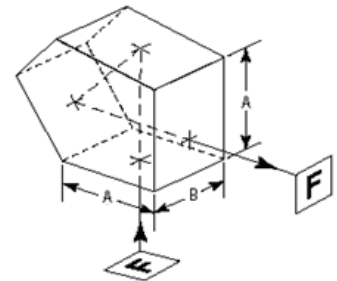
- Our Right Angle Folding Prisms are also available with antireflection coating on hypotenuse in order to reduce surface loss.
- Coating specifications, please see page 2-3.
- Other sizes and coatings are available upon request.

**Example :** The legs may be coated with second-surface aluminum protected by black sealing paint to ensure grazing incidence reflection. These prisms are suitable for optical delay lines and for high power use.

## Penta Prisms

### Specifications

<b>Material:</b>	BK7
<b>Dimension Tolerance:</b>	± 0.1mm
<b>Angular Tolerance:</b>	± 3 arc min
<b>Clear Aperture</b>	>central 85% of dimension
<b>Surface Quality:</b>	40/20 scratch /dig
<b>Flatness:</b>	$\lambda/10$ at 632.8 nm
<b>Chamfers:</b>	<0.3mm face width x 45° ± 15°
<b>Coating:</b>	Reflecting surface aluminum coated with black paint overcoat Entrance and exit surfaces are uncoated



### Order Information

PTP — 100 — 100 — BK7  
 Product Code    Size “A”=10.0 mm    Size “B” = 10.0 mm    Material

### Penta Prisms

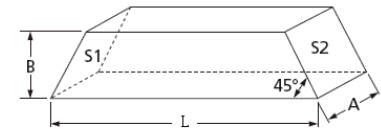
Part number	Size A (mm)	Size B (mm)
PTP-070-070-BK7	7.0mm	7.0mm
PTP-100-100-BK7	10.0mm	10.0mm
PTP-127-127-BK7	12.7mm	12.7mm
PTP-150-150-BK7	15.0mm	15.0mm
PTP-200-200-BK7	20.0mm	20.0mm
PTP-254-254-BK7	25.4mm	25.4mm

- Coatings: Optional, please see page 2,3 and 8.
- Better angular precision such as 1 min ,30sec ,15sec available upon request.
- Other sizes and material are available upon request.

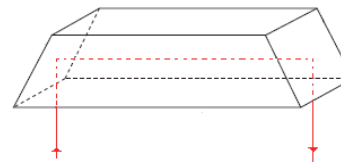
## Dove Prisms

### Specifications

<b>Material:</b>	BK7 or UV fused silica
<b>Dimension Tolerance:</b>	±0.15 mm
<b>Clear Aperture:</b>	>central 85% of dimension
<b>Angle Tolerance:</b>	<3 arc min.
<b>Surface Quality:</b>	40/20 scratch / dig
<b>Surface Flatness:</b>	λ/4@632.8nm
<b>Chamfers:</b>	<0.3mm face width x 45° ± 15°



**DPR: Dove Prisms used as rotator**



**DPF: Dove Prisms, used as retroreflector**

### Order Information

DPR	-	100	-	100	-	BK7
Product Code		Size "A"=10mm		Size "B" =10mm		Material

### Dove Prisms

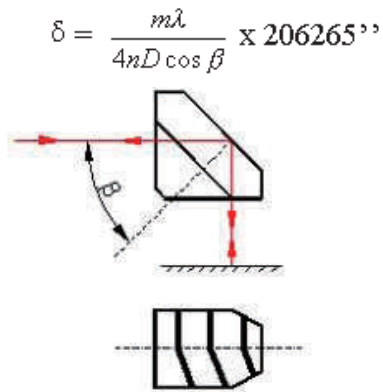
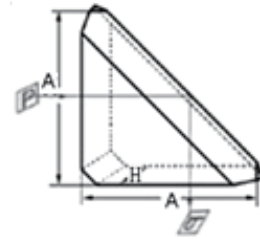
Part Number	Size A (mm)	Size L (mm)	Size B (mm)	Material
DRR-100-100-BK7	10	42.3	10	BK7
DPR-150-150-BK7	15	63.5	15	BK7
DPR-200-200-BK7	20	84.7	20	BK7
DPR-100-100-UVFS	10	44.9	10	UVFS
DPR-150-150-UVFS	15	67.4	15	UVFS
DPR-200-200-UVFS	20	89.9	20	UVFS
DPF-127-635-BK7	12.7	18.0	6.35	BK7
DPF-254-127-BK7	25.4	35.9	12.7	BK7

- Our Dove Prisms are also available with antireflection coating on surfaces with light in and out, in order to reduce surface loss.
- Coatings: optional, please see page 2-3.
- Other sizes are available upon request.

## Roof Prisms

### Specifications

<b>Material:</b>	BK7
<b>Dimension Tolerance:</b>	±0.1 mm
<b>Clear Aperture:</b>	>central 85% of dimension
<b>Angle Tolerance:</b>	3 arc min.
<b>Surface Quality:</b>	< 40 / 20 scratch / dig
<b>Surface Flatness:</b>	< λ / 10 @ 633 nm
<b>Chamfers:</b>	<0.3mm face width x 45° ± 15°



$$\delta = \frac{m\lambda}{4nD \cos \beta} \times 206265''$$

- δ:** roof angle error
- D:** clear aperture
- m:** fringe down through the roof line
- β:** angle between optical axis and vertical line of roof
- n:** refractive index
- λ:** wavelength

### Order Information

RP	—	230	—	315	—	BK7
Product Code		Size "A"=23.0mm		Size "H"=31.5mm		Material

### Roof Prisms

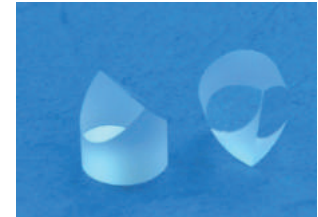
Part Number	A=(mm)	H (mm)	Material
RP-230-BK7	23.0	31.5	BK7

- Coatings: Optional, please see page 2-3.
- Other sizes , material and Roof angle error are available upon request.

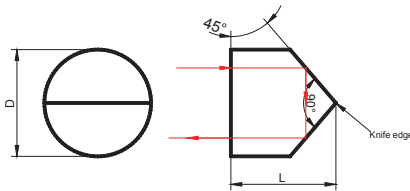
## Porro Prisms

### Specifications

<b>Material:</b>	BK7 or UV fused Silica
<b>Dimension Tolerance:</b>	± 0.1 mm
<b>Surface flatness:</b>	$\lambda / 10@633\text{nm}$
<b>Surface Quality:</b>	40/20 scratch / dig
<b>Angular Deviation:</b>	≤10 arc second
<b>Knife Edge:</b>	edge chips ≤5 μm
<b>Clear Aperture:</b>	>70% of central circular dimension
<b>Chamfers:</b>	<0.3mm face width x 45° ±15°

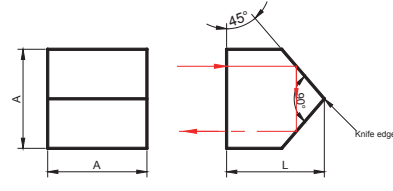


### Order Information



PRPC	—	127	—	053	—	BK7
Product Code		Size "D" =12.7mm		Size "L" =5.3mm		Material

### Order Information



PRPS	—	056	—	053	—	BK7
Product Code		Size "A" =5.6mm		Size "L" =5.3mm		Material

### Circular Porro Prisms

Part number	Size D (mm)	Size L (mm)	Material
PRPC-056-053-BK7	5.6	5.3	BK7
PRPC-127-127-BK7	12.7	12.7	BK7
PRPC-127-190-BK7	12.7	19.0	BK7
PRPC-254-381-BK7	25.4	38.1	BK7
PRPC-127-127-UVFS	12.7	12.7	UVFS
PRPC-127-190-UVFS	12.7	19.0	UVFS
PRPC-254-381-UVFS	25.4	38.1	UVFS

### Square Porro Prisms

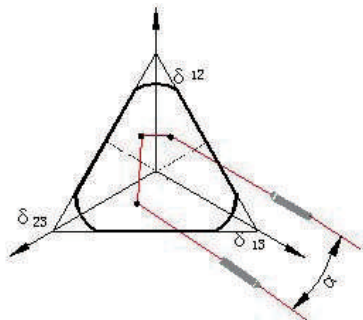
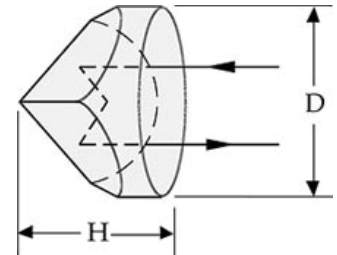
Part number	Size A (mm)	Size L (mm)	Material
PRPS-056-053-BK7	5.6	5.3	BK7
PRPS-127-127-BK7	12.7	12.7	BK7
PRPS-127-190-BK7	12.7	19.0	BK7
PRPS-254-381-BK7	25.4	38.1	BK7
PRPS-127-127-UVFS	12.7	12.7	UVFS
PRPS-127-190-UVFS	12.7	19.0	UVFS
PRPS-254-381-UVFS	25.4	38.1	UVFS

- Coatings: optional, please see page 2-3.
- Other sizes and material are available upon request.

## Retro-Reflectors

### Specifications

<b>Material:</b>	BK7
<b>Dimension Tolerance:</b>	±0.1 mm
<b>Clear Aperture:</b>	>85% of central circular dimension
<b>Angle Tolerance:</b>	≤3 arc min
<b>Surface Quality:</b>	20/10 scratch / dig
<b>Wavefront Distortion:</b>	λ/8@633nm



$$\alpha = 4.95 \quad (\delta_{12}, \delta_{23}, \delta_{13})$$

$\alpha$  : Beam deviation  
 $\delta$  : Angle error of three mutually perpendicular surfaces

### Order Information:

RRP	—	127	—	095	—	BK7
Product Code		Dia =12.7mm		Height (H)=9.5mm		Material

### Retro-Reflectors

Part number	Diameter D(mm)	Height H(mm)
RRP-127-095-BK7	12.7	9.5
RRP-254-188-BK7	25.4	18.8
RRP-380-285-BK7	38.0	28.5
RRP-640-480-BK7	64.0	48.0

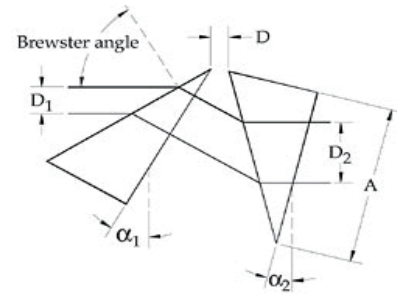
- Other sizes and material are available upon requests.



## Anamorphic Prisms

### Specifications

<b>Material:</b>	N-SF11
<b>Dimension Tolerance:</b>	± 0.1mm
<b>Angular Tolerance:</b>	<10 arc min
<b>Clear Aperture:</b>	>80% of the central area
<b>Surface Quality:</b>	40/20 scratch/dig
<b>Flatness:</b>	$\lambda/8@632.8\text{nm}$
<b>Coating:</b>	single layer MgF <sub>2</sub>



### Order Information

ANP	—	X020	—	050	—	NSF11
Product Code		Magnify: “D2 / D1”=2		Clear Aperture		Material

### Anamorphic Prisms

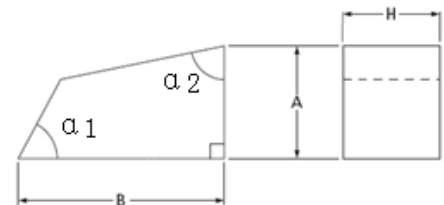
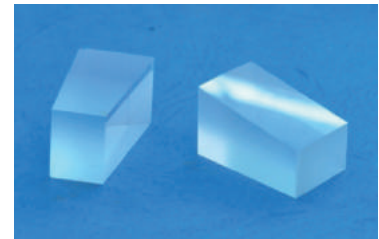
Part Number	X	CA	Material
ANP-X020-050-NSF11	2	5.0	N-SF11
ANP-X025-150-NSF11	2.5	15.0	N-SF11

- Coatings: optional, please see page 2-3.
- Other sizes and magnify are available upon request.

## Pellin Broca Prisms

### Specifications

<b>Material:</b>	BK7 or UV fused silica
<b>Dimension Tolerance:</b>	± 0.2mm
<b>Angular Tolerance:</b>	± 3 arc min
<b>Clear aperture:</b>	>80% of the central Area
<b>Surface quality:</b>	10/5 scratch /dig
<b>Flatness:</b>	$\lambda/10@632.8\text{nm}$



### Order Information

PBP	—	235	—	400	—	127	—	600	—	795	—	BK7
Product Code		Size "A"		Size "B"		Size "H"		Angle "α1"		Angle "α2"		Material
		=23.5mm		=23.5mm		=23.5mm		= 60°		= 79.5°		

### Pellin Broca Prisms

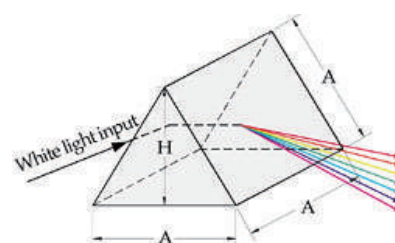
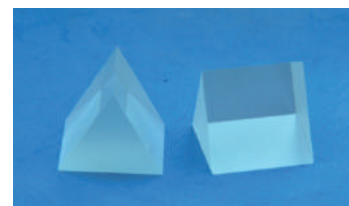
Part number	A	B	H	α1	α2	Material
PBP-235-400-127-600-795-BK7	23.5	40	12.7	60°	79.5°	BK7
PBP-110-200-640-600-795-UVFS	11	20	6.4	60°	79.5°	UVFS
PBP-235-400-127-600-795-UVFS	23.5	40	12.7	60°	79.5°	UVFS

- Coatings: optional, please see page 2-3.
- Other sizes are available upon request.

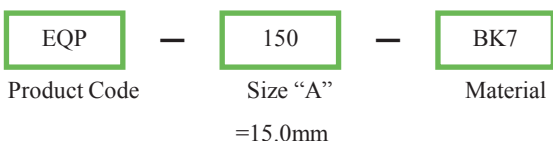
## Equilateral Dispersive Prisms

### Specifications

<b>Material:</b>	N-SF10 or BK7
<b>Dimension Tolerance:</b>	$\pm 0.1 \text{ mm}$
<b>Clear Aperture:</b>	>85% of central dimension
<b>Angular Deviation:</b>	$\leq 3 \text{ arc min}$
<b>Surface Quality:</b>	20/10 scratch/dig
<b>Surface Flatness:</b>	$\lambda/8 @ 632.8 \text{ nm}$
<b>Chamfers:</b>	$< 0.3 \text{ mm face width} \times 45^\circ \pm 15^\circ$



### Order Information



### Equilateral Dispersive Prisms

Part number	A (mm)	H (mm)	Material
EQP-150-BK7	15.0	12.99	BK7
EQP-200-BK7	20.0	17.32	BK7
EQP-250-BK7	25.0	21.65	BK7
EQP-300-BK7	30.0	25.98	BK7
EQP-350-BK7	35.0	30.30	BK7
EQP-400-BK7	40.0	34.64	BK7
EQP-500-BK7	50.0	43.30	BK7
EQP-600-BK7	60.0	51.96	BK7
EQP-300-NSF10	30.0	25.98	N-SF10
EQP-600-NSF10	60.0	51.96	N-SF10

- Coatings: optional, please see page 2-3.
- Other sizes and material are available upon request.



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