

CaF₂ Prism

Laser Optex Inc

Laser Optex manufacture several standard Prisms in VUV grade CaF₂ for use in the ultraviolet. In addition to our standard product line listed bellows, we especially fabricate pair prisms to custom specifications.

NOTE: high-energy Excimer laser radiation may cause blue color center formation in CaF₂. In such cases, MgF₂, although very expensive, may be desirable. Please Inquire sales@laseroptex.com

Right Angle Prism

The 45-45-90 degree Prism is the most commonly purchased of all our Prisms, and has several applications: to produce 90° reflection of light, to retro-reflect light (Porro Prism), and even as a front-surface mirror with the hypotenuse aluminized. The surfaces of these Prisms are flat within 1/10 -wave. Angles are within 3 minutes.

Mechanical Specifications

Dimensions	+0,-0.1 mm
Angles	±1-3 minutes
Surface Flatness	1/10 wave
Polish	10/5
Bevels	0.3 mm X 45°

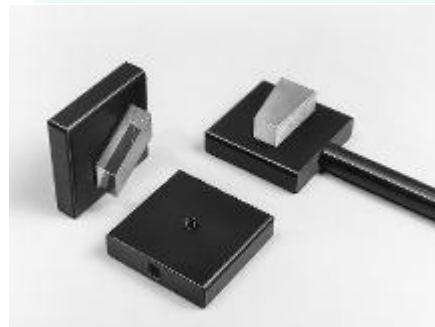
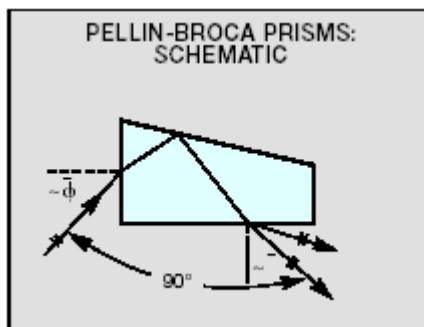
Catalog Number	Square Aperture	Material	Transmission Spectrum
PRCR-15	15 mm	CaF ₂	130nm - 9.6µm
PRCR-25	25 mm	CaF ₂	130nm - 9.6µm

Pellin-Broca Prism

We fabricate Pellin-Broca in CaF₂ for the vacuum-ultraviolet, These are designed so that the entrance and exit faces are approximately at Brewster's angle for the design spectrum, thus minimizing reflection losses for p-polarized light.

Mechanical Specifications

Dimensions	+0,-0.1 mm
Angles	±1-3 minutes
Surface Flatness	1/10 wave
Polish	10/5
Bevels	0.3 mm X 45°



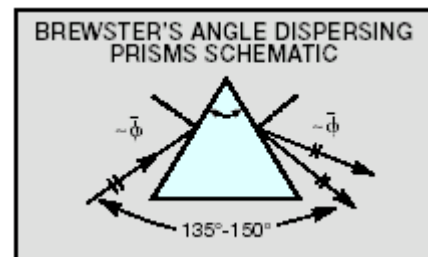
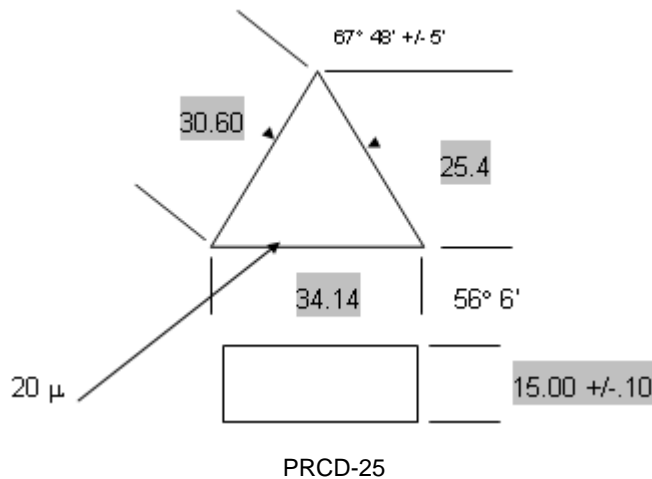
Catalog Number	Square Aperture	Material	Design Spectrum	Limits of Transmission	Separation $\lambda_2 - \lambda_1^*$	Brewster's Angle
PRCP-10	10 mm	CaF ₂	130nm - 250nm	9.6 μ m	~ 3°	56° - 59°
PRCP-20	20 mm	CaF ₂	130nm - 250nm	9.6 μ m	~ 3°	56° - 59°

Dispersion Prism

We fabricate Dispersing Prisms in CaF₂ for the vacuum-ultraviolet. These are designed so that the entrance and exit faces are approximately at Brewster's angle for the design spectrum, thus minimizing reflection losses for p-polarized light.

Mechanical Specifications

Dimensions	+0,-0.1 mm
Angles	$\pm 1-3$ minutes
Surface Flatness	1/10 wave
Polish	10/5
Bevels	0.3 mm X 45°



Catalog Number	Material	Design Spectrum	Limits of Trans.	Separation $\lambda_2 - \lambda_1^*$	Brewster's Angle	Apex Angle
PRCD-15	CaF ₂	130nm - 250nm	9.6 μ m	~ 5°	56° - 59°	69.9°
PRCD-25	CaF ₂	130nm - 250nm	9.6 μ m	~ 5°	56° - 59°	69.9°