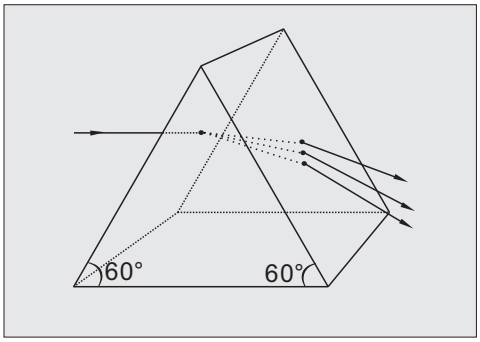
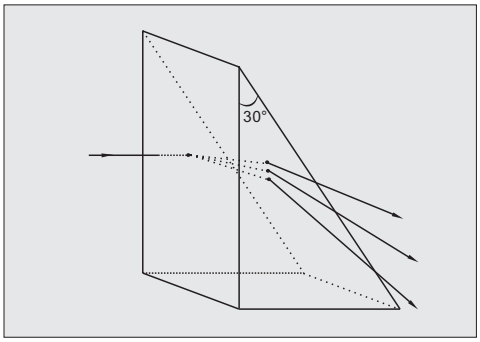
Dispersion Prism

Besides the Reflection Prisms, Foctek also offers the Dispersion Prisms. The most typical dispersion prism is equilateral prism made of high difference of refaction indexes for different wavelengths. The dispersion prisms of special use are: Litrow prisms, Pellin-Broca prisms, Brewster prisms, Amici Prisms.



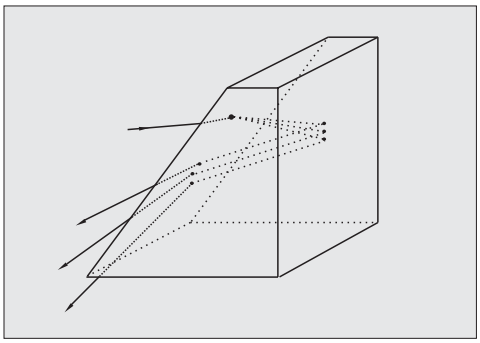
EQUILATERAL dispersion prism

EQUILATERAL dispersion prisms have three equal 60° angles, which are made of optical materials with high difference of refraction indexes for different wavelength, such as the SF10.



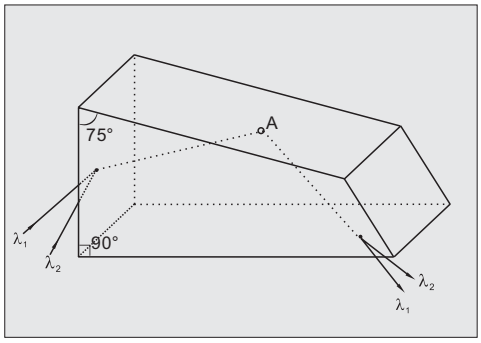
ISOSCELE prism

ISOSCELE dispersion prisms have the three angle with 30°- 60°- 90°. The prisms are also made of optical materials with high difference of refraction indexes for different wavelength, such as the SF10.



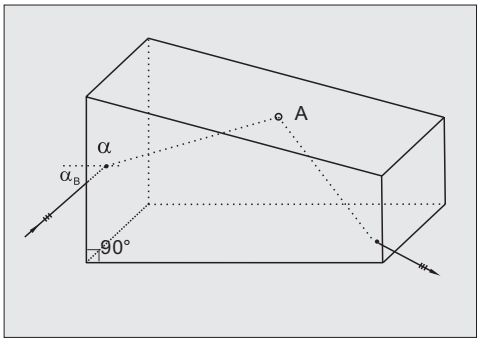
LITTROW prism

Light crossing the LITTROW prism is spectrally dispersed with simultaneous inversion of the path of rays caused by the reflection taking place on the back surface of the prism. The reflection surface has to be mirrored coating.



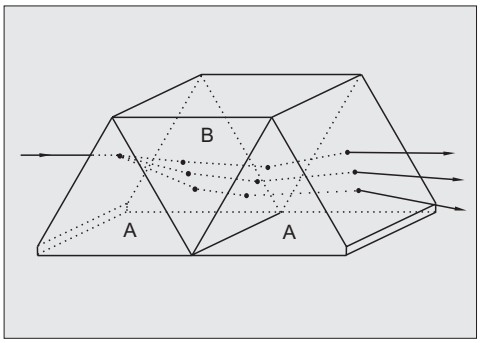
PELLIN - BROCA prism

PELLIN - BROCA prism is a special kind of dispersion prism. Besides dispersing properties, the prism has the property of diverging rays by 90°. By rotating the prism around it's A axis, you can select the wavelength what you require.



BREWSTER prism

BREWSTER prism is recommended for polarized light. P-polarized beam is transmitted with no losses when input beam is at the Brewster angle, while the S-polarized beam is reflected.



AMICI prism (Direct Vision Prisms)

The AMICI prisms generate dispersion of polychromatic light with simulaneous correction of divergence. All the dispersed beam output from the prism are parallel to the input beam. These Prisms consist of three prisms, which are cemented together. Two of the three prisms (A prism in the left draft) are made of different material to the other prism (B prism in the left draft). Typical combination of materials are Flint galss for A and Crown glass for B.

Standard Specifications:

Attribute	Specification
Material	On request, for example BK7, Fused Silica, MgF_2, SF10, etc
Range of Size (mm)	4 ～ 100
Dimension Tolerance (mm)	±0.1
Clear Aperture	>90%
Angle Accuracy	±3 arc min.
Pyramid Error	±5 arc min.
Flatness (@633nm)	<λ/2
Surface Quality	60/40
Coating	uncoated, AR, HR, PR coated etc.

Note:

According to Customer's requirement, we can make non-standard Dispersion Prisms with significantly higher optical parameters. Surface quality better than 10/5, flatness better than // 10, angle tolerance better than +/-10 arc sec is available. Prism in mounting is also available.