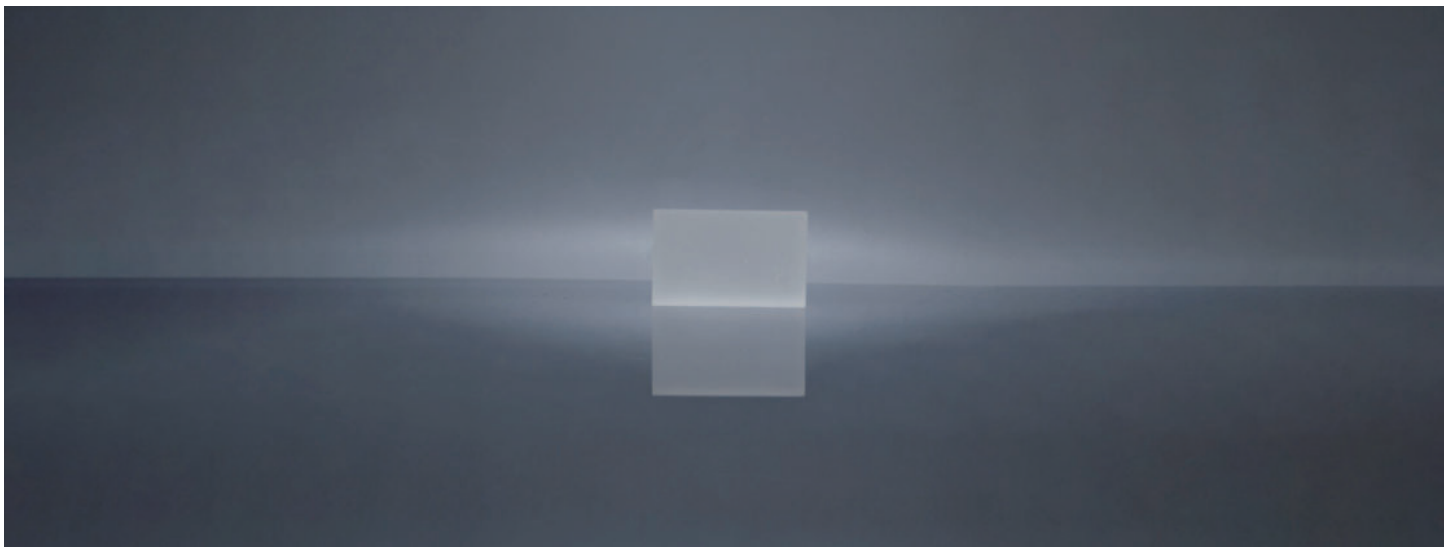
BGO



DESCRIPTION

BGO crystal, also known as bismuth germanate crystal, with the chemical formula $Bi_4Ge_3O_{12}$, is a crystalline form of an anode oxide. BGO crystal has a cubic structure, is colorless and transparent, and is insoluble in water. It emits green fluorescence with a peak wavelength of 480 nm when it is exposed to radiation from high-energy particles or gamma rays or X-rays. with higher stopping power, efficient scintillation, first-class energy resolution, and non-hygroscopicity, BGO is an excellent scintillation material, ideal for a wide range of applications in high-energy physics, nuclear physics, space physics, nuclear medicine, geology, etc. BGO crystals have low dark With the advantages of low electrical conductivity, colorless transparency, and insolubility in water, BGO can also be used in nonlinear optics, such as Pukels boxes, and photorefractive devices in the ultraviolet range by its high electro-optical coefficient. BGO is also widely used as a scintillator crystal, which produces photons in the visible region when the crystal is subjected to high-energy gamma rays.

FEATURES

- High electro-optical coefficient
- Low dark conductivity
- Large size components or wafers up to 3"
- Customized upon request

APPLICATIONS

- Optical Switch
- Optical correlators
- Spatial light modulator

CRYSTAL SPECIFICATION

Light Passing Aperture	85%
Dimensional Tolerance	+0.0/-0.2mm
Thickness tolerance	±0.2mm
Parallelism	<30 arc seconds
Chamfering	<0.3mm @45°
Surface quality	40/20
Wavefront distortion	<λ/4 @632.8nm
Coatings	No coating

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CRYSTAL CHARACTERISTICS

Chemical formula	$Bi_4Ge_3O_{12}$
Lattice parameters	10.15Å
Density	9.2g/cm^3
Transmission range	0.45-7μm
Refractive index	2.55 @0.63μm
Spinability	41.5deg/mm @500nm
Electro-optical coefficient	r_{41}=4.1pm/v
Dielectric constant	40

SPECTRA