

Bismuth Germanate Scintillation ($\text{Bi}_4\text{Ge}_3\text{O}_{12}$)

Energetic particle / ray detectors
Electric potential / voltage sensors

Crystal Properties	Crystal Class	Cubic
	Point Group	43 m
	Space Group	I_413d
	Lattice Parameter	a 1.0518 nm
	Melting Point	1045 °C
	Density	7.12 g/cm ³
	Hardness	5 Mohs
	Electro-optic Coefficient	γ_{41} 1.03 x10 ⁻¹² m/V
	Transparency Range	350 ~ 5500 nm
	Refractive Index	2.098 (632.8 nm)
	Phase Velocity	3908 m/s ([100], 100 MHz)
	Excited Spectrum	305 nm
	Luminescence Spectrum	480 ~ 510 nm
	Relative Emission Intensity	10 ~ 14 nm
Threshold Energy	10.5 MeV	

Specifications	Boules	Typical Diameter	∅ 35±2 mm
		Typical Length	50 mm
		Typical Orientation	[001] [110]
	Wafers	Typical Diameter	∅ 32±0.5 mm
		Typical Thickness	0.2 ~ 1.0 mm
		Typical Orientation	[001] [110]
		Polish	0.25 ~ 0.016 μm
		Flatness	≤ 15 μm
	Blocks	Bow	≤ 15 μm
		Typical Size	≥ 25x25x50 mm
		Polish	0.25 ~ 0.016 μm

