

Alpha Spectra, Inc. Data Sheet
BGO Detectors
 Grand Junction, Colorado

Alpha Spectra, Inc. offers a large variety of BGO scintillation detectors. Our detectors have been used in numerous applications. Applications include: x-ray detection in medical diagnostics, density and level gauges in industrial applications, hand held instruments in health physics applications and annular detectors for Compton Suppression systems.



Figure 1. BGO crystal blank. (ASI photo)

We fabricate many different configurations including: crystal blanks, open face, thin, thin integral, demountable, side well, end well, environmental, ruggedized or annular types. Look at our photo gallery to see many of these designs.

The BGO detectors shown in Figure 1 consist of a 2" x 2" BGO crystal mounted on a 2" PMT. ASI offers many sizes. Please call us to discuss your requirement.

Alpha Spectra, Inc. BGO Specifications

Detector Style:	Blanks, open face, thin, thin integral, demountable, side well, end well, environmental, ruggedized or annular type
Crystal Material:	Bi ₄ G ₃ O ₁₂ Bismuth Germanate (BGO)
Density:	7.13 g/cc
Effective Atomic Number:	76
Hygroscopic:	No
Wavelength of Maximum Emission:	505 nm
Principle Decay:	0.30 μsec (at room temperature)
Index of Refraction:	2.15
Light Output Relative to NaI(Tl) as measured on a Bialkali PMT:	0.13 (NaI(Tl) = 1.00)
Energy Resolution at 662 KeV:	9.5% to 11.5% (typical) depends on design configuration.
Dimensions:	As required by customer design
Crystal Housings:	Aluminum, stainless steel
Electronics:	14 pin, voltage divider or preamp configuration.