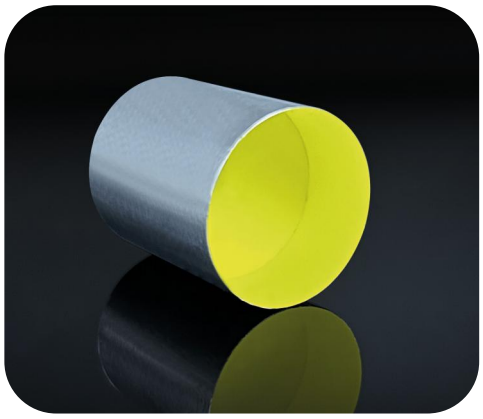
GAGG(Ce) Crystal



GAGG(Ce) (cerium-doped gadolinium aluminum gallium garnet) is a new type of scintillator that can be used for single photon emission computerized tomography, gamma ray and Compton scattering detection. Many properties of GAGG(Ce) are suitable for use in gamma ray spectroscopy and medical imaging, such as high photon yield and emission peak near 520 nm, which is very suitable for detection with silicon photomultiplier tubes. EPIC Crystal provides three types of GAGG crystals: fast decay(GAGG-F), balanced (GAGG-T) and high light output (GAGG-HL) to meet the application needs of different customer fields.

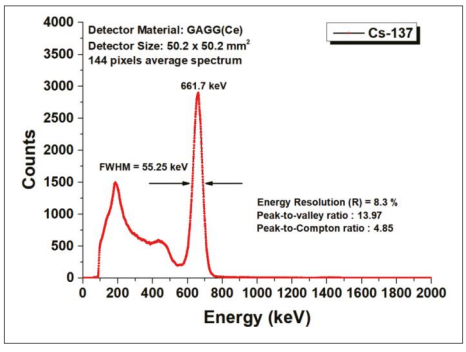
General parameters	GAGG-F	GAGG-T	GAGG-HL	Unit
Density	6.6	6.6	6.6	g/cm^3
Hardness	8	8	8	mohs
Refractive Index	1.91	1.91	1.91	/
Light Output	30,000	42,000	54,000	ph/MeV
Energy Resolution	7%	6%	5%	5×5×5 mm@662keV
Decay Constant	50	90	150	ns
Wavelength of Emission Peak	520	530	530	nm
Radiation Resistance	10^7	10^7	10^7	rad
Hygroscopic	no	no	no	/

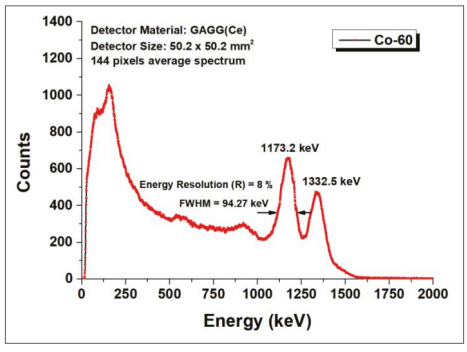
Basic Information

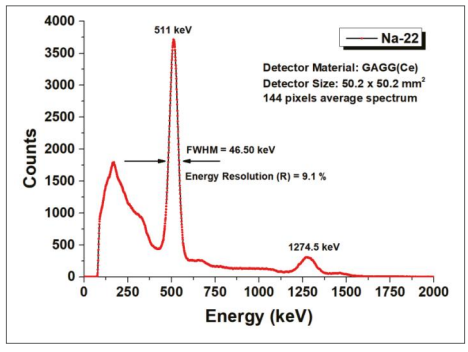
- Growth technique ---------- Czochralski
- Dimension(max) ---------- Diameter 60 mm×180 mm
- Achieved items ---------- Single crystal and array

Characterization

- 12×12 GAGG array, 4.20 mm pitch, Radiation source: Cs^{137}, Co^{60}, Na^{22}







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