

GFAG

(Gadolinium fine aluminum gallate)

Fast timing properties &
High light output &
High energy resolution
Scintillator



Patent No.: EP2671940(B1), US8969812(B2), RU2622124(C2), JP5952746(B2)
EP3138891(B1), US10174247(B2), RU2670919(C9)

Product Information

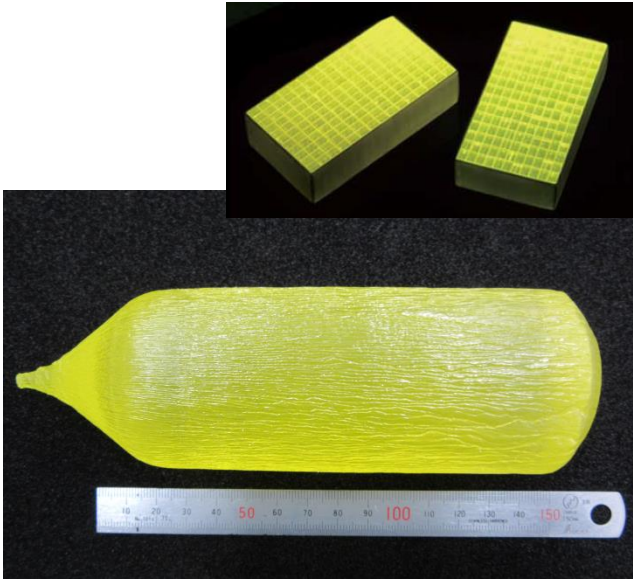


Fig.1: Photograph of GFAG scintillator. *1

*1 Kamada et al., IEEE Trans. Nucl. Sci., 63-2 (2016) 443-447.

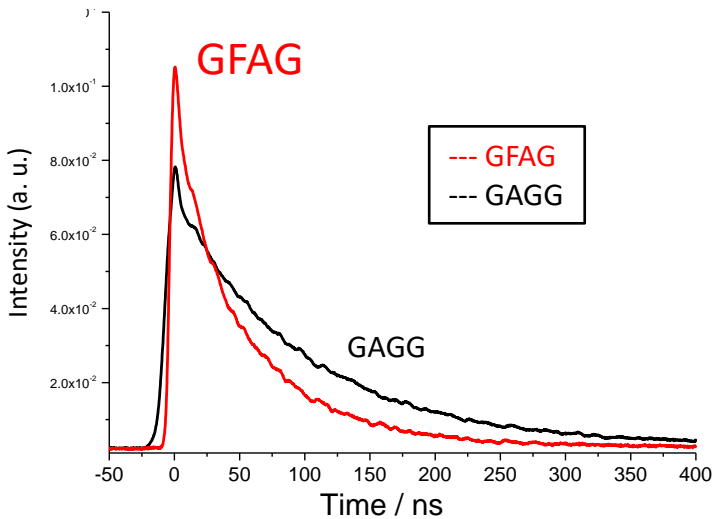


Fig.2: Scintillation decay curves of GFAG and GAGG irradiated with gamma rays from a ^{137}Cs source.

Outline

GFAG scintillator has significantly faster decay time and timing resolution than that of GAGG.

GFAG has also high energy resolution, high light output, and high density. Moreover, GFAG has no hygroscopic and self radiation nature.

2-inch-diameter GFAG bulk single crystal is available now.

Scintillation Properties*2

Light output [photons/MeV]	25,000-35,000
Energy resolution*3 (662 keV, FWHM) [%]	8-9%
Decay time [ns]	≤ 40
Emission wavelength [nm]	520
Density [g/cm ³]	6.7

*2 All properties were measured using 5 x 5 x 5 mm³ sample.

*3 Energy resolution was measured with APD.

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