

GAGG

$(\text{Gd}_3\text{Al}_2\text{Ga}_3\text{O}_{12}(\text{Ce}))$

High light output &
High energy resolution &
Non hygroscopic nature
Scintillator

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



Product Information



Fig.1: Photograph of 3-inch-diameter GAGG scintillator. *1

*1 Kamada et al., J. Cryst. Growth, 452 (2016) 81-84.

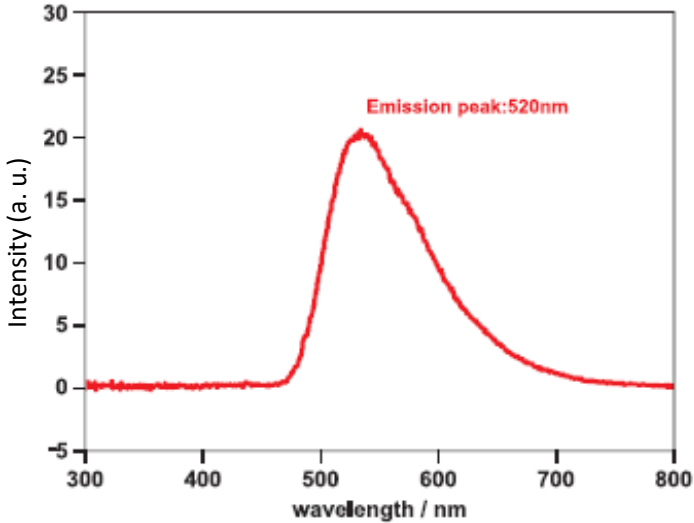


Fig.2: Radioluminescence spectra of GAGG excited by X-ray, $\text{CuK}\alpha$, 30mA, 40mV

Outline

GAGG scintillator has high light output, high energy resolution and high density among oxide scintillators. GAGG has no hygroscopic and no self radiation nature.

3-inch-diameter GAGG bulk single crystal is available now.

Scintillation Properties*2

| | |
|---|-----------------------|
| Light output [photons/MeV] | 50,000-56,000 |
| Energy resolution*3 (662 keV, FWHM) [%] | 5-6 |
| Decay time [ns] | 92ns(86%), 174ns(14%) |
| Emission wavelength [nm] | 520 |
| Density [g/cm ³] | 6.63 |

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

*3 Energy resolution was measured with APD.

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