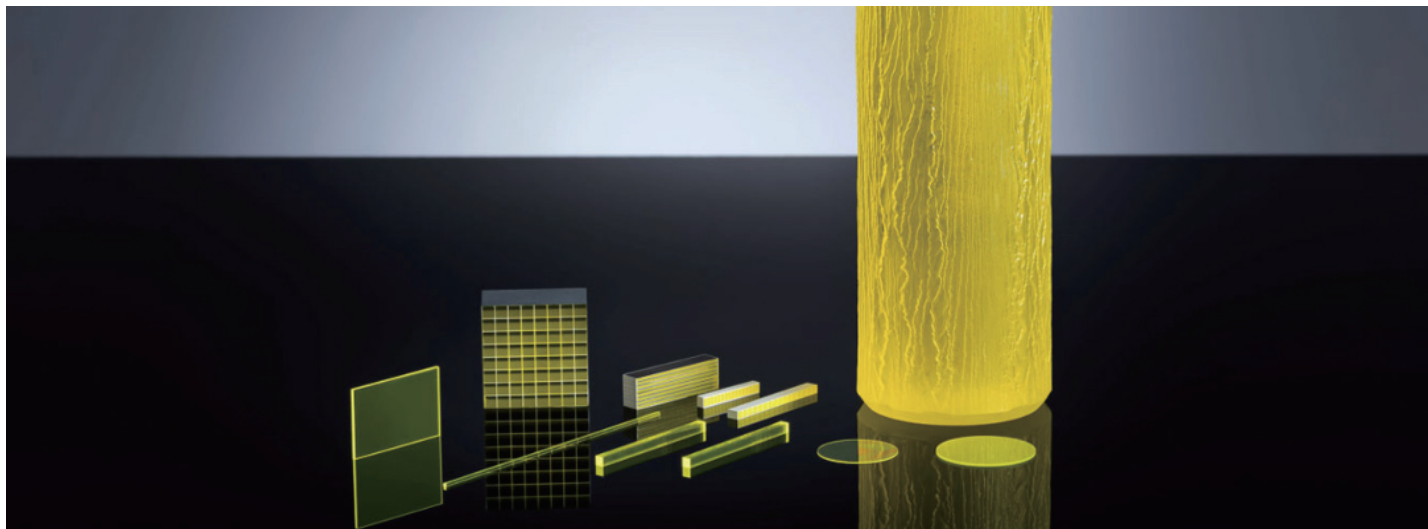


Ce: GAGG scintillator crystals



DESCRIPTION

Ce: GAGG crystal (chemical formula $Ce: Gd_3Al_2Ga_3O_{12}$) is a scintillation crystal excellent scintillating performance. Which exhibits stable physical and chemical properties, high thermal conductivity. The effective atomic number of the GAGG crystal is as high as 54.4, and the peak wavelength of the emission spectrum located at 520nm, which matches well with the sensitive wavelength range of the photomultiplier tube (PMT) and silicon photodiode (PD). Ce: GAGG crystals are widely used in photomultiplier tubes, photoelectric counters, scintillation screens and other high-energy particle detection. Such as β -rays, γ -rays, CT, scanning electron microscope SEM and and positron emission tomography (PET).

CRYLINK has developed 2 kinds of GAGG(Ce) crystal, with faster decay time(GAGG-K), with high light output(-GAGG-G) for the customer in different field.

FEATURES

- High density
- High light output
- Fast decay time
- Good radiation resistance
- Low afterglow
- High energy resolution

APPLICATIONS

- γ -ray detection
- X-ray medical imaging
- Nuclear physics
- Nuclear radiation detection
- PET/SEM
- Scintillation Screen

PARAMETERS

SCINTILLATOR PROPERTIES

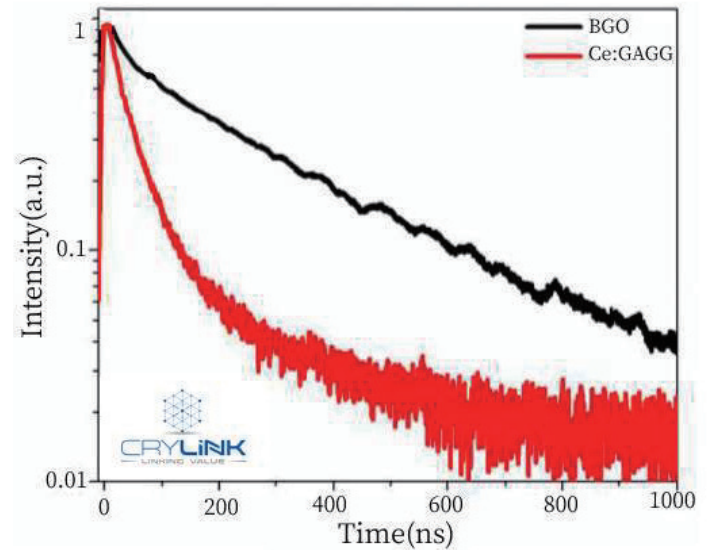
	GAGG-K	GAGG-G
Density(g/cm^3)	6.6	6.6
Refractive index	1.91	1.91
Light output(Photons/Mev)	30000	50000
Energy resolution($5 \times 5 \times 5$ mm cubic, 662KeV)	7%	4.20%
Decay time(ns)	50	150
Emission wavelength max(nm)	520	530
Radiation resistance(rad)	10^7	10^7
Self-radiation	No	No



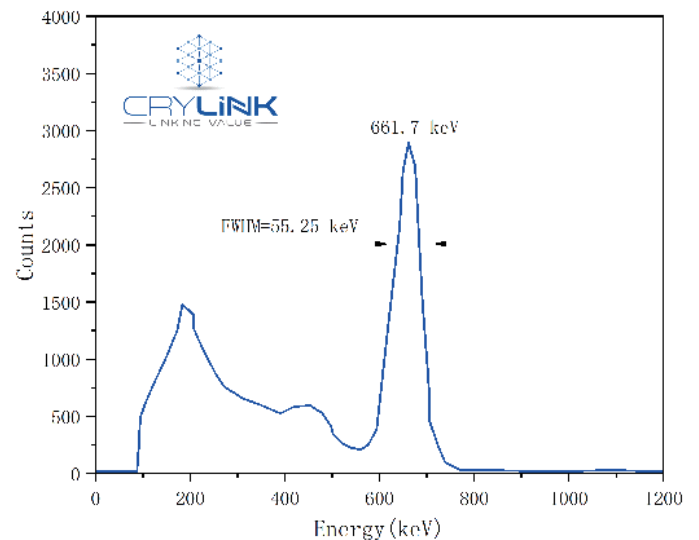
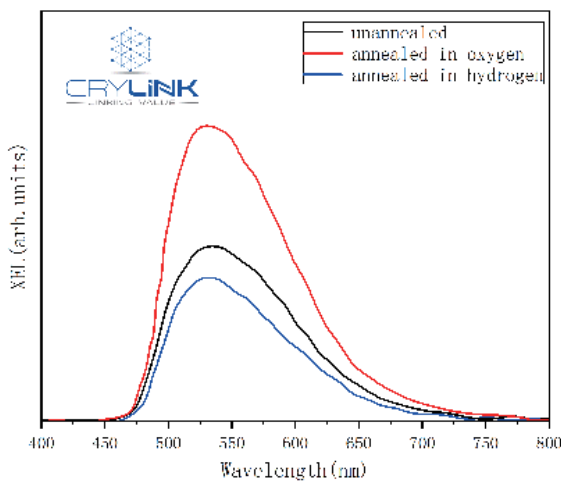
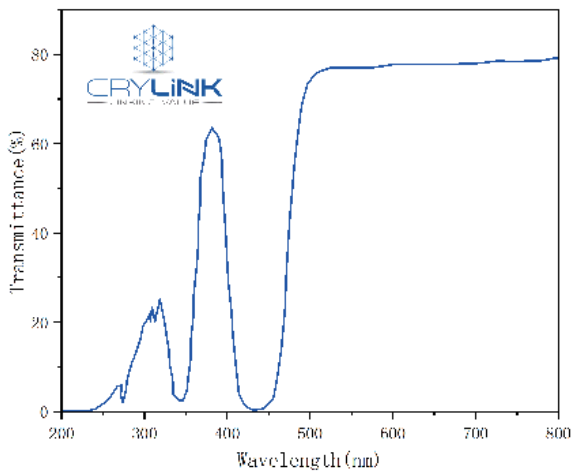
Ce: GAGG scintillator crystals

MATERIAL PROPERTIES

Chemical formula	Ce: Gd ₃ Al ₂ Ga ₃ O ₁₂
Density (g/cm ³)	6.63
Melting point (°C)	1850
Hardness (Mho)	8
Hygroscopic	No
Cleavage	No
Solubility (g/100gH ₂ O)	N/A
Thermal expansion coeff (C ⁻¹)	TBA*10 ⁻⁶



SPECTRA

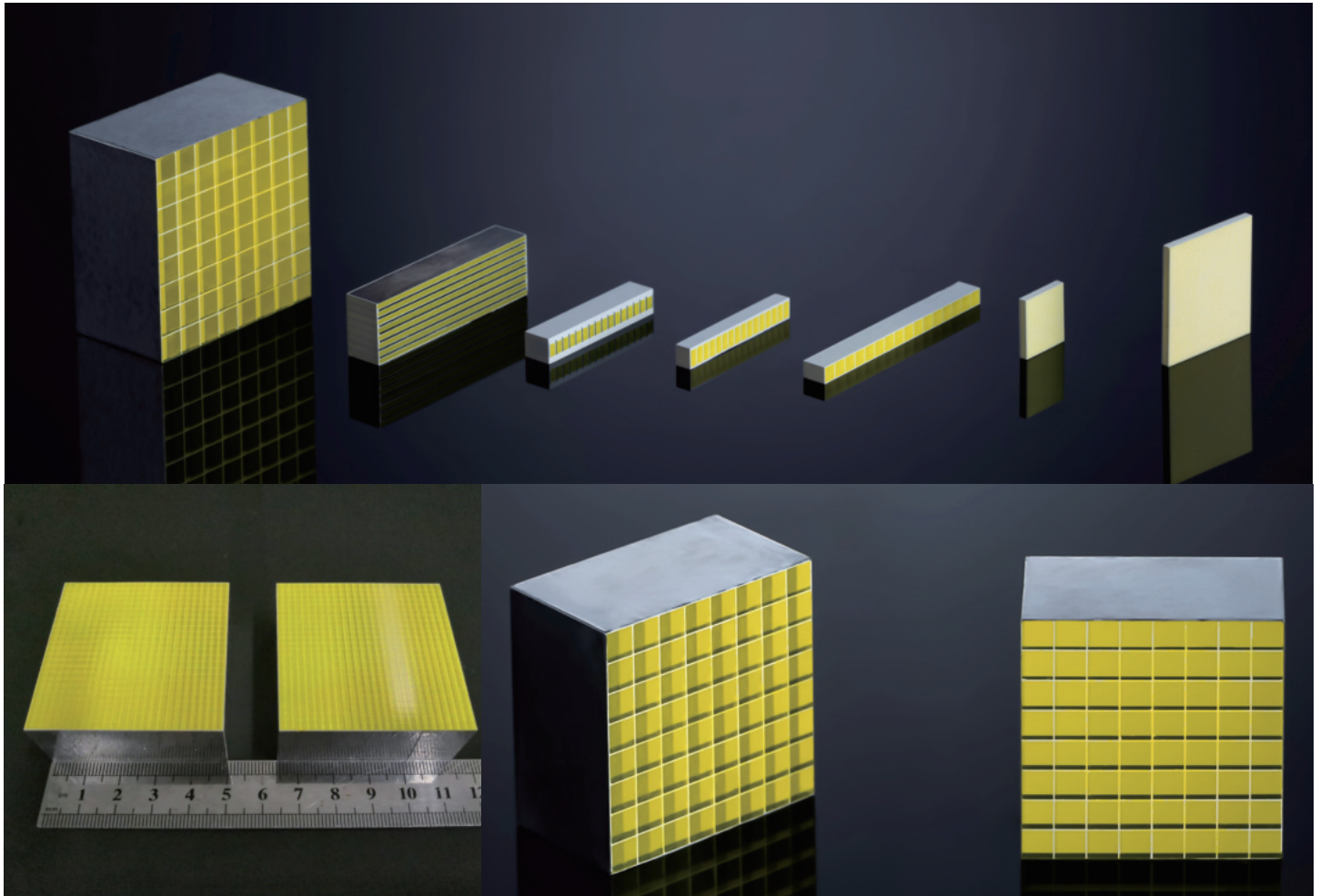


PMT:R1306 ; Reflector: Teflon(0.8mm);
 Radiation source: Cs¹³⁷ HV:650V
 Light Output :50000 ph/MeV; Energy resolution :8.9%



Ce: GAGG scintillator crystals

As NanJing Crylink Co.Ltd has advanced crystal cutting, polishing technology, and stable matrix assembly technology. Customized crystals and technical services can be provided to customers.



Ce:GAGG Crystal matrix assembly
 Crystal Pixel size: 2x2mm / (or can be customized)
 Reflector Interpixel: 0.2mm BaSO₄/ ESR
 Array: 100 x 100 x 4 mm³/ (Or can be customized)

