

List of scintillator characteristics

Crystal	Now growth size	Properties	Typical time of delivery	Remarks	Applications
GAGG	3"Φ×100 mmL	Light yield= 45,000~50,000 Ph./MeV Decay time τ ~ 90ns ΔE=8-9%@662keV 5mm□ Density 6.63g/cm3 Zeff:52 Emission wavelength: 520nm	Large:3 month Small size :1 month		SPECT Environmental radiation detection Gamma camera Compton camera Survey meter etc.
HR-GAGG	2"Φ × 100 mmL	Light yield=40,000-50,000 Ph./MeV Decay time τ ~ 400ns ΔE≤5%@662keV 5mm□(APD) Density ≤6.3g/cm3 Zeff:52 Emission wavelength: 520nm	3 months Small size :1 month		SPECT Environmental radiation detection Gamma camera Compton camera Survey meter etc.
GFAG	3"Φ × 100 mmL	Light yield=25,000-35,000 Ph./MeV Decay time τ≤40ns ΔE=-15%@662keV 5mm□ Density 6.7g/cm3 Zeff:52 Emission wavelength: 520nm	3 months Small size : 1 month		Positron emission tomography (PET) Single photon emission computed tomography (SPECT) High Energy physics
LiCAF (Ce)	2"Φ × 50mmL	Light yield= ~5,000 Ph./MeV Decay time τ<~40ns Density 2.99g/cm3 Zeff:15 Emission wavelength: 280~320nm	3 months Small:2 month		Alternatives to3H, Neutron imaging, Neutron diffraction, survey meter, etc.
LiCAF (Eu)	2"Φ × 50mmL	Light yield= ~40,000 Ph./MeV Decay time τ<1,600ns Density 2.99g/cm3 Zeff:15 Emission wavelength: 360~390nm	3 months Small:2 month		Alternatives to3H, Neutron imaging, Neutron diffraction, survey meter, etc.
SrI2 (Eu)	2"Φ × 2"L array	Light yield=70,000-80,000 Ph./MeV Decay time τ=300-1500ns ΔE=3-4%@662keV 5mm□(PMT) Density 4.6g/cm3 Zeff:49 Emission wavelength: 420nm	1 inch : 3 months 1.5 inch : 4 month 2 inch : 4 month	Strong hygroscopicity	SPECT Environmental radiation detection Gamma camera Compton camera Survey meter etc.
CeBr3	1"Φ × 1"L array	Light yield=70,000-80,000 Ph./MeV Decay time τ=20ns ΔE=3-4%@662keV 5mm□(PMT) Density 5.2g/cm3 Zeff:46 Emission wavelength: 370nm	3 months	Hygroscopicity	PET SPECT Environmental radiation detection Gamma camera Compton camera Survey meter etc.
La-GPS	10 × 10 × 10 mm	Light yield=38,000-48,000 Ph./MeV Decay time τ=60-70ns ΔE=4-5%@662keV 5mm□(PMT) Density ~5.3g/cm3 Zeff:51 Emission wavelength: 390nm		High temperature stability up to 180° C	SPECT Environmental radiation detection Gamma camera Compton camera Survey meter etc.

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