

Comparison of Oxide Scintillation Crystals with NaI:Tl

	NaI:Tl	GSO	GSOZ	LGSO	Fast-LGSO	GPS
Density (g/cm ³)	3.67	6.71	6.71	7.3	7.3	5.5
Effective atomic number Z_{eff}	50	58	58	63	63	~56
Absorption coefficient at 511 keV	0.35	0.7	0.7	0.85	0.85	~0.6
Peak wavelength λ_{em} (nm)	415	430	430	410	410	~380
Refractive index at λ_{em}	1.85	1.85	1.85	1.83	1.83	~1.8
Light output (arb. Unit)	100	20	24	~90	70~80	~140
Decay time (ns)	230	30~70	40~60	41	30~35	~150
Energy resolution (% at 662keV)	7	9	9	~8	~8	~6
Hygroscopicity	Yes	No	No	No	No	No
Self-radiation	No	No	No	Yes	Yes	No
Melting point (°C)	651	1950	1950	2100	2100	1800