



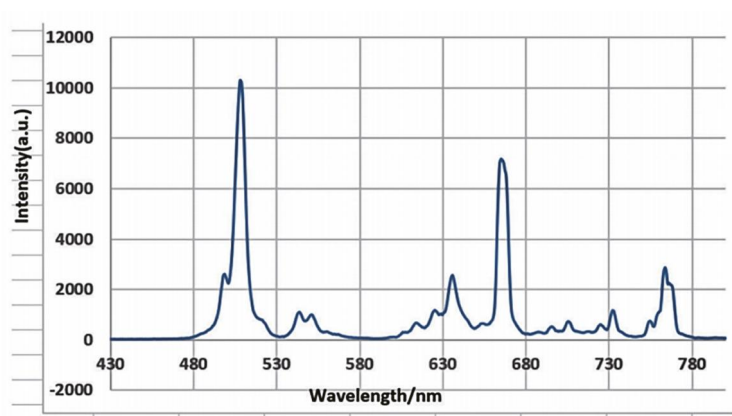
GOS( $Gd_2O_2S$ ) ceramic scintillation crystal material has its main luminescence peak at 512 nm, translucent, density  $7.34 \text{ g/cm}^3$ , high light output, afterglow 3 ms less than 0.1%, high moisture resistance, no toxic substances, and easy to process. According to different dopants, it can be divided into GOS(Tb) and GOS(Pr), which are widely used in X-ray cargo detectors, foreign object detectors, analytical detectors, radiation detectors, nuclear medicine imaging systems, industrial detection and other fields.

General parameters	GOS(Pr)	GOS(Tb)	Unit
Density	7.34	7.34	$\text{g/cm}^3$
Transparency	Translucent	Translucent	/
Wavelength of Emission Peak	510	550	nm
Decay Constant	3	600	$\mu\text{s}$
Light Output	28,000	45,000	ph/MeV
Afterglow	<0.1@3ms	<0.1@20ms	%
Hygroscopic	no	no	/
Cleavage	no	no	/
Refractive Index	2.2	2.2	/
Hardness	4.5	4.5	mohs

## Basic Information

- Growth technique ..... Hot Pressing
- Dimension(max) .....  $80 \text{ mm} \times 80 \text{ mm} \times 40 \text{ mm}$
- Achieved items ..... Sheet linear or 2 D arrays, GOS with PD detectors

## Characterization



X-ray excited luminescence spectrum