Engineering
A Safer World

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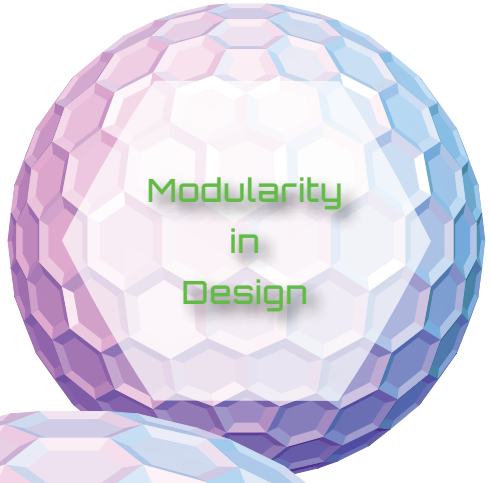

YSO

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Technical Info
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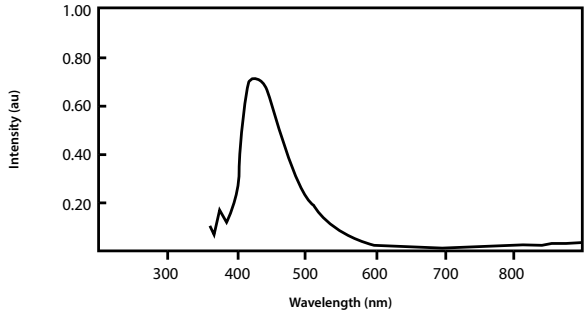
YSO

YSO (Y_2SiO_5) belongs to the monoclinic system. The YSO scintillation crystal has the best combination of properties available at present.

YSO emits 420 nm light and couples well with PMT under the stimulation of high energy. It also has the advantage of high light yield, short decay time, and high density, non-deliquescence, and all around stable physical and chemical properties.

RL - Spectra of YSO



Feature	Parameter
YSO	
Density (g/cm)	4.5
Melting Point (K)	2273
Index of Refraction	1.8
Effective Atomic No.(Z)	39
Hardness (Mohs)	5.6
Radiation Length (cm)	1.16
Hygroscopic	No
Cleaveage Plane	None
Wavelength (nm)	420
Decay time (ns)	50-70
Light Yield (photons/keV$_\gamma$)	10
Photoelectron yield [(% of NaI(Tl)] for γ-ray	20

Owing to its excellent time and energy resolution, YSO is widely used in radiation detection, dosimetry, and security industries.

YSO properties include:

- *High light output*
- *Short decay time*
- *High density & anti-radiation hardness*
- *Stable chemical & physical properites*

With access to the complete crystal finishing process, X-Z LAB has the means to provide custom crystals using state-of-the-art line cutting; fine grinding and polishing machines; and stable matrix assembly techniques.

Energy Spectra of 662 keV γ-rays from ^{137}Cs Source Measured with YSO