

YAP(Ce) Scintillators

Cerium doped yttrium aluminum (or Ce:YAP) crystals is a type of fast scintillating materials, it is mechanically strong and chemically inert, suitable for precise mechanical fabrications. A very thin aluminum layer film could be deposited on the entrance surface to avoid the light-sensitivity. YAP(Ce) can well suit for imaging applications due to its ultra-low energy secondary X-ray emissions. Ce:YAP detectors are widely used in the field of gamma and X-ray counting, electron microscopy, electron and X-ray imaging screens, and computer tomography systems.



Features:

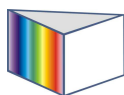
- Fine physical and chemical characteristics
- Suitable for ultra-thin screen applications
- Suitable for tomography systems
- Fast decay time: 40ns
- High light output

Ability:

- Growth method: Czochralski
- Formula: $YAlO_3$ (cerium content: 0.2~1.2 at%)
- Maximum dimension: \varnothing 50 mm x 160 mm
- Available items: single crystals
- Metal coating: Al, Au, Ag etc.
- Protective coating: SiO_2

Basic Properties:

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Density(g/cm ³)	5.4
Melting Point (°C)	1875
Refractive Index at Peak Emission	1.95



Emission Peak (nm)	370
Emission Spectral Range (nm)	325-425
Decay Time (ns)	40
Light Output (photons/KeV)	18
Radiation Length (cm)	2.7
Hygroscopic	None
Cleavage Plane	None

Note: The crystal boules, blanks and polished elements are available.

Application Notes:

- Scanning electron microscope(SEM)
- Ultra-thin imaging screens
- Electron imaging
- Gamma, X-ray counter
- X-ray imaging