

YAP(Ce) is a fast scintillation crystal with excellent performance. It has high light output, fast decay time, good thermal stability, mechanical properties, and stable chemical properties. Ce:YAP scintillation crystals are mainly used in fields such as rapid y-ray detection, animal PET scanning systems, electronic imaging (SEM), high-energy physics, and medium and low-energy X-ray two-dimensional imaging.

General parameters	YAP(Ce)	Unit
Density	5.40	g/cm <sup>3</sup>
Decay Constant	25	ns
Light Output	18,000	ph/MeV
Melting Point	2,148	K
Wavelength of Emission Peak	370	nm
Hardness	8.50	mohs
Refractive Index	1.95	/
Hygroscopic	No	/
Cleavage	No	/

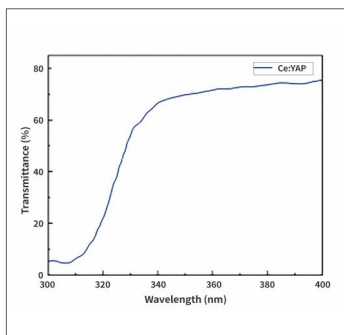
## Basic Information

- Growth method ..... Czochralski
- Cerium content ..... 0.2-0.4at%
- Dimension(max) ..... Diameter 50 mm×200 mm
- Achieved items ..... Single crystal and coating

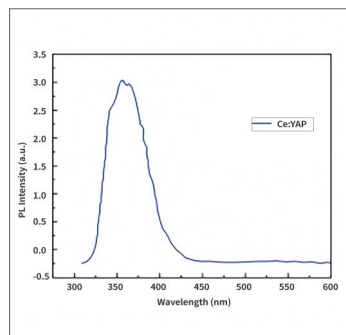
## Features and Applications

- High density
- High temperature resistance
- Stable physical and chemical properties
- No hygrscopic & cleavage
- High light output, Fast decay time
- Fast Gamma Ray Detection
- Oil prospecting
- Two-dimensional imaging of medium and low energy X-rays
- Animal PET imaging scan
- Electron Imaging (SEM)

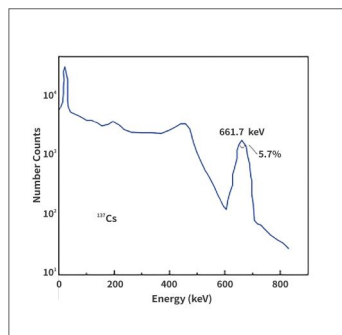
## Characterization



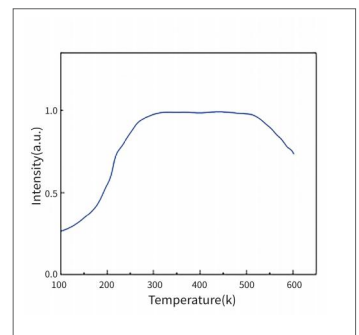
Ce:YAP transmittance



Ce:YAP PL Intensity



Energy spectrum of 662 keV Y-rays from a Cs<sup>137</sup> source measured with Ce:YAP



The dependence of light output of Ce:YAP on temperature