

LuAG:Pr is a fast scintillation crystal with decay time of 22ns. Based on its excellent properties of LuAG:Pr, it is a good candidate to be used in PEM, TOF-PET and fast particle imaging. Besides, LuAG:Pr has good energy resolution and temperature stability, so it also can be well applied in logging.

### Basic Information

- Growth technique: Czochralski
- Dimension(max):  $\varnothing$  80mm x 100 mm
- Achieved items: Single crystal, 2 dimensional array

### General Properties

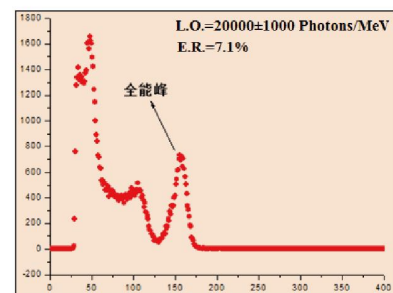
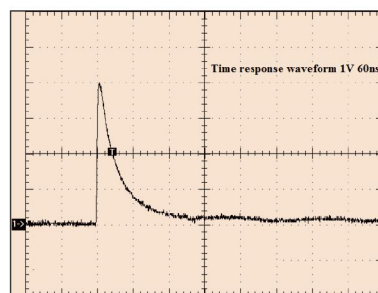
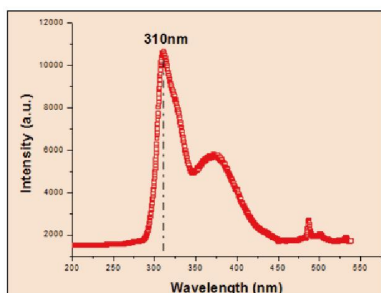
Density(g/cm <sup>3</sup> )	6.7
Radiation resistance(rad)	1x10 <sup>6</sup>
Wavelength of emission max(nm)	310 and 360
Light output(Photons/Mev)	20,000
Decay time(ns)	22
Hygroscopic	No
Effective atomic number	63
Hardness(Mho)	8.0

### Characterization

Dimension of LuAG(Pr): 6 x 6 x 6 mm

PMT: R1306; Reflector: Teflon(0.80 mm); Radiation source: Cesium<sup>137</sup>; HV: 650V

Light output:20000 photons/Mev; Energy resolution:7.1%



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