

# CERIUM DOPED Lutetium OXYORTHOSILICATE

Cerium-doped lutetium oxyorthosilicate was recently discovered, with light intensity 75 % of NaI. Cerium doped lutetiumoxyorthosilicate (LSO) was recently discovered. Some of the properties of LSO are compared with those of BGO and NaI(Tl) in Table 1. BGO is currently the most widely used scintillator in positron emission tomography (PET) because of its high atomic number and high density. Cerium-doped lutetium oxyorthosilicate, which has a unique combination of properties including high emission intensity, fast decay time, high density, and high atomic number. These properties result in excellent signal-to-noise, fast coincidence timing, high count-rate capability, and high detection efficiency making LSO superior to any other known scintillator for many applications.

## Quick Facts

<b>Product</b>	:	Cerium Doped Lutetium Oxyorthosilicate
<b>Stock No</b>	:	NS6130-12-001024
<b>Form</b>	:	Powder
<b>Purity</b>	:	99.9%
<b>Color</b>	:	White
<b>APS</b>	:	40-60µm

## Technical Specification

<b>Molecular Formula</b>	:	(Lu <sub>2</sub> SiO <sub>5</sub> (Ce))
<b>Density</b>	:	7.4 g/cc
<b>Relat. Light Intensity</b>	:	75
<b>Refraction</b>	:	1.82

## Applications

- ✓ Medical imaging
- ✓ High energy physics experiments
- ✓ Geophysical exploration



**APS**  
40-60µm

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