

Phosphor Information Leaflet

GENERAL

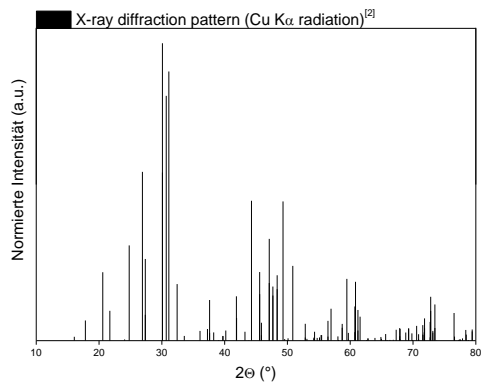
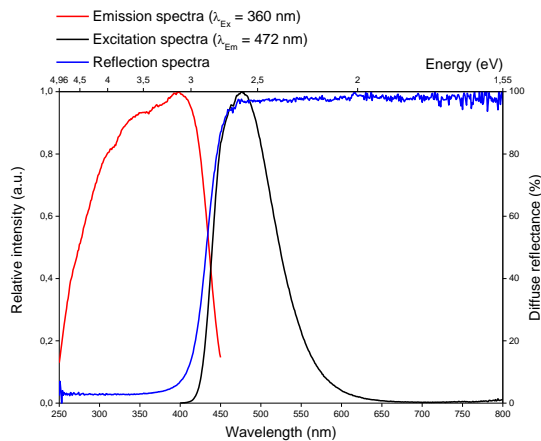
Name	Strontium barium chlorophosphate europium
Chemical formula	$(\text{Sr}, \text{Ba})_5(\text{PO}_4)_3\text{Cl}:\text{Eu}^{2+}$
Application areas	Light emitting diodes, Fluorescent lamps

OPTICAL PROPERTIES

Excitation maxima ($\lambda_{\text{Em}} = 472 \text{ nm}$)	399 nm (3.11 eV)
Emission maximum ($\lambda_{\text{Ex}} = 360 \text{ nm}$)	476 nm (2.60 eV)
Centroid wavelength	492 nm (2.52 eV)
FWHM	85 nm
Lumen equivalent	203 lm/W
CIE1931 chromaticity coordinates (x, y)	0.1510, 0.2235
Band edge of host lattice	5.3 eV ^[1]
Decay time $\tau_{1/e}$	0.6 μs
$T_{1/2}$	725 K

PHYSICAL PROPERTIES

Body colour	White
Density	4.15 g/cm ³
Refractive index	1.634 – 1.638 ^[3]
Mineral type	Apatite
Crystal system	Hexagonal
Space group (#)	P6 ₃ /m (176)



- [1] P. Rulis, L. Ouyang, W. Y. Ching. Physical Review B 70 (2004) 155104
- [2] PDF-4+ (ICDD) 04-016-5287
- [3] Gemological Institute of America (GIA), Gem Reference Guide 1995