



Phosphor Information Leaflet

GENERAL

Name	Lutetium oxy ortho-silicate praseodymium
Chemical formula	$\text{Lu}_2\text{SiO}_5:\text{Pr}^{3+}$
Application areas	Xe excimer discharge lamps for disinfection Scintillators Cathode-ray lamps

OPTICAL PROPERTIES

Excitation maxima @ 492 nm em.	172 nm (7.21 eV), 220 nm (5.64 eV), 248 nm (5.00 eV)
Emission maximum @ 172 nm exc.	272 nm (4.56 eV), 310 nm (4.00 eV), 492 nm (2.52 eV), 615 nm (2.02 eV)
Centroid wavelength	319 nm (3.89 eV)
Full width @ half emission maximum	26 nm
Lumen equivalent	-
CIE1931 chromaticity coordinates (x, y)	-
Band edge of host lattice	7.52 eV
Reflection @ 250 nm	40%
Decay time $\tau_{1/e}$	14 ns (Exc. 172 nm, Emis. 270 nm)

PHYSICAL PROPERTIES

Body colour	White
Density	7.40 g/cm ³
Refractive index (at λ)	1.82 (589.3 nm)
Mineral type	-
Crystal system	Monoclinic
Space group (#)	C12/c1 (15)

