



Phosphor Information Leaflet

GENERAL

Name	Lutetium phosphate terbium
Chemical formula	LuPO ₄ :Tb
Application areas	Plasma display panels, green emitting scintillator

OPTICAL PROPERTIES

Excitation maxima @ 543 nm	150 nm (8.3 eV), 185 nm (6.7 eV), 223 nm (5.6 eV)
Emission maximum @ 180 nm exc.	492 nm (2.5 eV), 544 nm (2.3 eV), 588 nm (2.1 eV), 622 nm (2.0 eV)
Centroid wavelength	579 nm (2.1 eV)
Full width @ half emission maximum	Lines
Lumen equivalent	499 lm/W _{vis.}
CIE1931 chromaticity coordinates (x, y)	0.382; 0.588
Band edge of host lattice	138 nm (9.0 eV)
Reflection @ 371 nm	62 %
Decay time $\tau_{1/e}$	~ 1 ms

PHYSICAL PROPERTIES

Body colour	White
Density	6.5 g/cm ³
Refractive index	1.68 (520.8 nm)
Mineral type	Xenotime-(Y)
Crystal system	tetragonal
Space group (#)	I 41/a m d z (141)

