



Phosphor Information Leaflet

GENERAL

Name	Yttrium phosphate cerium
Chemical formula	$\text{YPO}_4:\text{Ce}^{3+}$
Application areas	Tanning lamps, photochemistry
Optical transition	$[\text{Xe}]4f^1 ({}^2F_{5/2}) - [\text{Xe}]5d^1$

OPTICAL PROPERTIES

Excitation maxima @	320 nm (3.88 eV), 250 nm (4.96 eV)
Emission maximum @ 254 nm exc.	354 nm (3.50 eV), 335 nm (3.70 eV)
Centroid wavelength	348 nm (3.56 eV)
Full width @ half emission maximum	18 nm, 13 nm
Lumen equivalent	-
CIE1931 chromaticity coordinates (x, y)	-
Band edge of host lattice	155 nm (8.30 eV)
Reflection @ 254 nm	12 %
Decay time 1/e	32 ns

PHYSICAL PROPERTIES

Body colour	White
Density	4.17 g/cm ³
Refractive index (at λ)	1.66 (515 nm)
Mineral type	Xenotime
Crystal system	Tetragonal
Space group (#)	I4 ₁ /amd (141)



