



Phosphor Information Leaflet

GENERAL

Name	Lanthanum phosphate praseodymium
Chemical formula	$\text{LaPO}_4:\text{Pr}^{3+}$
Application areas	UV-C Radiation sources for photochemical purposes
Optical transition	$[\text{Xe}]4f^2(^3\text{H}_J)-[\text{Xe}]4f^15d^1$

OPTICAL PROPERTIES

Excitation maxima @	165 nm (7.73 eV), 200 nm (6.21 eV)
Emission maximum @ 160 nm exc.	225 nm (5.52 eV)
Centroid wavelength	235 nm (5.29 eV)
Full width @ half emission maximum	20 nm
GAC overlap	80%
Decay time $\tau_{1/10}$	12 ns
Band edge of host lattice	150 nm (8.28 eV)
Reflectance @ 254 nm	98 %

PHYSICAL PROPERTIES

Body colour	Pale green
Density	5.08 g/cm ³
Refractive index (at λ)	1.85 (589.3 nm)
Mineral type	Monazite
Crystal system	Monoclinic
Space group (#)	$P2_1/c$ (14)

