



Phosphor Information Leaflet

GENERAL

Name	Lanthanum phosphate thulium
Chemical formula	LaPO ₄ :Tm ³⁺
Application areas	Plasma displays (Blue pixel), Product authentication

OPTICAL PROPERTIES

Excitation maxima @	356 nm (3.48 eV)
Emission maximum @ 356 nm exc.	452 nm (2.74 eV)
Centroid wavelength	529 nm (2.34 eV)
Full width @ half emission maximum	Lines
Lumen equivalent	72 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.176, 0.067
Band edge of host lattice	150 nm (8.30 eV)
Reflection @ 356 nm	98 %

PHYSICAL PROPERTIES

Body colour	White
Density	5.08 g/cm ³
Refractive index (at λ)	1.78 (a,c-axis), 1.84 (c-axis) (589 nm)
Mineral type	Monazite
Crystal system	Monoclinic
Space group (#)	P 1 21/n 1 (14)

