



Phosphor Information Leaflet

GENERAL

Name	Yttrium phosphate thulium
Chemical formula	YPO ₄ :Tm ³⁺
Application areas	Product authentication

OPTICAL PROPERTIES

Excitation maxima @	361 nm (3.43 eV)
Emission maximum @ 361 nm exc.	451 nm (2.75 eV)
Centroid wavelength	536 nm (2.31 eV)
Full width @ half emission maximum	Lines
Lumen equivalent	47 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.174, 0.047
Band edge of host lattice	155 nm (8.00 eV)
Reflection @ 361 nm	96 %

PHYSICAL PROPERTIES

Body colour	White
Density	4.17 g/cm ³
Refractive index (at λ)	1.76 (589 nm)
Mineral type	Xenotime
Crystal system	Tetragonal
Space group (#)	I 41/a m d S (141)

