



Phosphor Information Leaflet

GENERAL

Name	Zinc Orthosilicate Manganese
Chemical formula	Zn ₂ SiO ₄ :Mn ²⁺
Application areas	Fluorescent lamps, Plasma displays, Field Emission Displays, Cathode Ray Tubes

OPTICAL PROPERTIES

Excitation maxima @	266 nm (Δ 4.66 eV)
Emission maximum @ 254 nm exc.	530 nm (Δ 2.34 eV)
Centroid wavelength	565 nm (Δ 2.19 eV)
Full width @ half emission maximum	42 nm
Lumen equivalent	554 lm/W _{opt}
CIE1931 chromaticity coordinates (x, y)	0.254, 0.699
Band edge of host lattice	225 nm (Δ 5.5 eV)
Reflection @ 254 nm	3%
Decay time 1/e	~ 5 ms (strongly dependent on Mn ²⁺ conc.)

PHYSICAL PROPERTIES

Body colour	White
Density	4.25 g/cm ³
Refractive index (at 589 nm)	1.691 - 1.719
Mineral type	Willemite
Crystal system	Trigonal
Space group (#)	R-3 h (148)

