



Phosphor Information Leaflet

GENERAL

Name	Aluminium oxide manganese
Chemical formula	$\text{Al}_2\text{O}_3:\text{Mn}^{4+}$
Application areas	Laser gain media, colour pigment

OPTICAL PROPERTIES

Excitation maxima @	319 nm (3.89 eV), 465 nm (2.67 eV)
Emission maximum @ 410 nm exc.	678 nm (1.83 eV), 694 nm (1.79 eV)
Centroid wavelength	698 nm (1.78 eV)
Full width @ half emission maximum	Line
Lumen equivalent	15 lm/W
CIE1931 chromaticity coordinates (x, y)	0.675, 0.320
Band edge of host lattice	145 nm (8.7 eV)
Reflection @ 319 nm	50 %
Decay time $\tau_{1/e}$	1.0 ms

PHYSICAL PROPERTIES

Body colour	Light rose
Density	3.98 g/cm^3
Refractive index (at λ)	1.76 (589 nm)
Mineral type	Corundum
Crystal system	Trigonal
Space group (#)	R -3 c H (#167)

