



Phosphor Information Leaflet

GENERAL

Name	Gadolinium magnesium pentaborate cerium terbium manganese
Chemical formula	$GdMgB_5O_{10}:Ce^{3+},Tb^{3+},Mn^{2+}$
Application	Color 90 lamps

OPTICAL PROPERTIES

Excitation maxima @	275 nm (4.51 eV)
Emission maximum @ 254 nm exc.	625 nm (1.98 eV)
Centroid wavelength	641 nm (1.93 eV)
Full width @ half emission maximum	Lines, 90 nm (Mn^{2+} band)
Lumen equivalent	194 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.615, 0.374
Band edge of host lattice	3.02 eV
Reflection @ 254 nm	9 %
Decay time $\tau_{1/e}$	~2 ms (@545); ~11 ms (@625)

PHYSICAL PROPERTIES

Body colour	White
Density	3.92 g/cm ³
Particle size d ₅₀	10 μm
Mineral type	
Crystal system	Monoclinic
Space group (#)	P 1 21/c 1 (#14)

