



Phosphor Information Leaflet

GENERAL

Name	Yttrium magnesium germanate manganese
Chemical formula	$Y_2Mg_3Ge_3O_{12}:Mn$
Application areas	pcLEDs for horticulture lighting
Optical transition	$[Ar]3d^3 (^4A_2) - [Ar]3d^3 (^4T_2)$

OPTICAL PROPERTIES

Excitation maxima @ 659 nm	288 nm (4.3 eV)
Emission maximum @ 288 nm exc.	660 nm (1.9 eV)
Centroid wavelength	655 nm (1.9 eV)
Full width @ half emission maximum	lines
Lumen equivalent	78 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.711; 0.289
Band edge of host lattice	5.2 eV
Reflection @ 288 nm	57 %
Decay time $\tau_{1/e}$	4.9 ms

PHYSICAL PROPERTIES

Body colour	White
Density	4.8 g/cm ³
Refractive index	
Mineral type	Garnet
Crystal system	cubic
Space group (#)	la-3 d (230)



