



Phosphor Information Leaflet

GENERAL

Name	Calcium gadolinium niobate manganese
Chemical formula	$\text{Ca}_2\text{GdNbO}_6:\text{Mn}^{4+}$
Application areas	NIR phosphor, medical imaging and therapy, Horticulture lighting

OPTICAL PROPERTIES

Excitation maxima @	306 nm (4.1 eV), 507 nm (2.4 eV)
Emission maximum @ 160 nm exc.	676 nm (1.8 eV)
Centroid wavelength	690 nm (1.8 eV)
Full width @ half emission maximum	35 nm
Lumen equivalent	15 lm/W
CIE1931 chromaticity coordinates (x, y)	
Band edge of host lattice	~ 4.0 eV
Reflection @ 306 nm	22 %
Decay time $\tau_{1/e}$	> 1 ms

PHYSICAL PROPERTIES

Body colour	light yellow
Density	5.4 g/cm ³
Refractive index (at λ)	
Mineral type	Layered perovskite
Crystal system	Monoclinic
Space group (#)	$P12_1/c1$ (14)



