



# Phosphor Information Leaflet

## GENERAL

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

## OPTICAL PROPERTIES

Excitation maxima @	313 nm (4.0 eV), 517 nm (2.4 eV)
Emission maximum @ 160 nm exc.	697 nm (1.8 eV)
Centroid wavelength	698 nm (1.8 eV)
Full width @ half emission maximum	35 nm
Lumen equivalent	7 lm/W
CIE1931 chromaticity coordinates (x, y)	0.727, 0.273
Band edge of host lattice	~ 4.0 eV
Reflection @ 313 nm	26 %
Decay time $\tau_{1/e}$	> 1 ms

## PHYSICAL PROPERTIES

Body colour	light yellow
Density	5.0 g/cm <sup>3</sup>
Refractive index (at $\lambda$ )	
Mineral type	Layered perovskite
Crystal system	Monoclinic
Space group (#)	$P12_1/c1$ (14)

