



Phosphor Information Leaflet

GENERAL

Name	Calcium aluminate manganese
Chemical formula	$\text{CaAl}_{12}\text{O}_{19}:\text{Mn}^{4+}$
Application areas	Light emitting diodes

OPTICAL PROPERTIES

Excitation maxima ($\lambda_{\text{Em}} = 656 \text{ nm}$)	336 nm (3.69 eV), 392 nm (3.16 eV), 464 nm (2.67 eV)
Emission maximum ($\lambda_{\text{Ex}} = 464 \text{ nm}$)	656 nm (2.34 eV)
Centroid wavelength	668 nm (1.85 eV)
FWHM	lines
Lumen equivalent	44.5 lm/W
CIE1931 chromaticity coordinates (x, y)	0.7222, 0.2776
Band edge of host lattice	~ 6.7 eV
Decay time $\tau_{1/e}$	~ 2 ms
$T_{1/2}$	~ 425 K

PHYSICAL PROPERTIES

Body colour	pale pink
Density	3.36 g/cm ³
Refractive index	1.807
Mineral type	Habonite
Crystal system	Hexagonal
Space group (#)	P6 ₃ /mmc (194)

