



Phosphor Information Leaflet

GENERAL

Name	Calcium aluminate chromium
Chemical formula	$\text{CaAl}_2\text{O}_4:\text{Cr}^{3+}$
Application areas	NIR phosphor, medical imaging and therapy

OPTICAL PROPERTIES

Excitation maxima @ 692 nm em.	410 nm (3.02 eV), 555 nm (2.23 eV)
Emission maximum @ 550 nm exc.	692 nm (1.79 eV)
Centroid wavelength	715 nm (1.73 eV)
Full width @ half emission maximum	Lines
Lumen equivalent	12 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.687, 0.313
Band edge of host lattice	214 nm (5.78 eV)
Reflection @ 555 nm	93 %

PHYSICAL PROPERTIES

Body colour	yellow
Density	2.90 g/cm ³
Refractive index (at λ)	1.643
Mineral type	-
Crystal system	Monoclinic
Space group (#)	P12 ₁ /c1 (#14)

