



Phosphor Information Leaflet

GENERAL

Name	Calcium gadolinium aluminate europium
Chemical formula	$\text{CaGdAlO}_4:\text{Eu}^{3+}$
Application areas	Optical marker
Optical transitions	$[\text{Xe}]4f^6 ({}^5\text{D}_0) - [\text{Xe}]4f^6 ({}^7\text{F}_J)$

OPTICAL PROPERTIES

Excitation maxima @	285 nm (4.4 eV), 396 nm (3.1 eV)
Emission maximum @ 340 nm exc.	621 nm (2.0 eV), 702 nm (1.8 eV)
Centroid wavelength	654 nm (1.9 eV)
Full width @ half emission maximum	lines
Lumen equivalent	178 lm/W _{VIS}
CIE1931 chromaticity coordinates (x, y)	0.656, 0.343
Band edge of host lattice	
Reflectance @ 285 nm	17 %
Decay time (1/e)	1.1 ms

PHYSICAL PROPERTIES

Body colour	white
Density	5.94 g/cm ³
Refractive index (at λ)	1.916, 1.94 (1043 nm)
Mineral type	-
Crystal system	Tetragonal
Space group (#)	I ₄ /mmm (139)

