



Phosphor Information Leaflet

GENERAL

Name	Calcium copper silicate
Chemical formula	$\text{CaCuSi}_4\text{O}_{10}$
Application areas	Light emitting diodes, paintings, NIR marker
Optical transition	$[\text{Ar}]3d^9 (^2B_{1g}) - [\text{Ar}]3d^9 (^2B_{2g})$

OPTICAL PROPERTIES

Excitation maxima @ 492 nm	624 nm (2.0 eV), 804 nm (1.5 eV)
Emission maximum @ 292 nm exc.	907 nm (1.4 eV)
Centroid wavelength	927 nm (1.3 eV)
Full width @ half emission maximum	121 nm
Lumen equivalent	0
CIE1931 chromaticity coordinates (x, y)	-
Band edge of host lattice	335 nm (3.7 eV)
Decay time $\tau_{1/e}$	150 μs

PHYSICAL PROPERTIES

Body colour	blue
Density	3.1 g/cm^3
Refractive index (at $\lambda = 589.3 \text{ nm}$)	1.6
Mineral type	-
Crystal system	Tetragonal
Space group (#)	$P4/ncc (130)$

