



Phosphor Information Leaflet

GENERAL

Name	Gadolinium gallate garnet chromium
Chemical formula	$Gd_3Ga_5O_{12}:Cr^{3+}$
Application areas	Light emitting diodes

OPTICAL PROPERTIES

Excitation maxima @	450 nm (≈ 2.75 eV)
Emission maximum @ 450 nm exc.	730 nm (≈ 1.70 eV)
Centroid wavelength	756 nm (≈ 1.64 eV)
Full width @ half emission maximum	93 nm
Lumen equivalent	2 lm/W _{opt}
CIE1931 chromaticity coordinates (x, y)	0.699, 0.297
Band edge of host lattice	4.03
Reflection @ 450 nm	61%
Decay time 1/e	ca. 150 μ s

PHYSICAL PROPERTIES

Body colour	Pale green
Density	7.08 g/cm ³
Refractive index	1.97 (at 430 nm), 1.96 (at 633 nm), 1.95 (at 1064 nm)
Mineral type	Garnet
Crystal system	Cubic
Space group (#)	I a -3 d (230)

