



Phosphor Information Leaflet

GENERAL

Name	Yttrium gallate garnet chromium
Chemical formula	$\text{Y}_3\text{Ga}_5\text{O}_{12}:\text{Cr}^{3+}$
Application areas	Light emitting diodes

OPTICAL PROPERTIES

Excitation maxima @	291 nm (Δ 4.26 eV), 444 nm (Δ 2.79 eV), 617 nm (Δ 2.01 eV)
Emission maximum @ 450 nm exc.	752 nm (Δ 1.65 eV)
Centroid wavelength	780 nm (Δ 1.58 eV)
Full width @ half emission maximum	118 nm
Lumen equivalent	1 lm/W _{opt}
CIE1931 chromaticity coordinates (x, y)	0.692, 0.303
Band edge of host lattice	6.5 eV
Reflection @ 450 nm	69%
Decay time 1/e	ca. 150 μs

PHYSICAL PROPERTIES

Body colour	Pale green
Density	5.79 g/cm ³
Refractive index	-
Mineral type	Garnet
Crystal system	Cubic
Space group (#)	I a -3 d (230)

