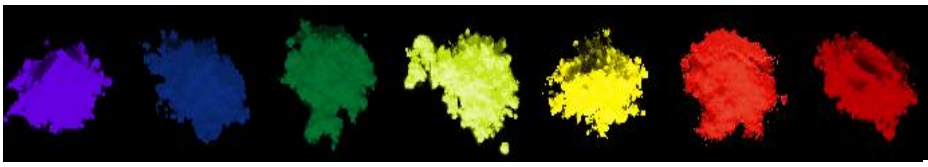

Phosphor Information Leaflet

GENERAL

Name	Strontium gallium chromium oxide neodymium magnesium
Chemical formula	$Sr(Ga,Cr)_{12}O_{19}:Nd^{3+},Mg^{2+}$
Application areas	Optical marker, NIR emitting pcLEDs
Optical transition	Nd^{3+}: $[Xe]4f^1$ ($^4F_{3/2}$) – $[Xe]4f^1$ ($^4I_{9/2}$) Cr^{3+}: $[Ar]3d^3$ (^2E, $^2T_1$, $^4T_2$) – $[Ar]3d^3$ ($^4A_2$)

OPTICAL PROPERTIES

Excitation maxima @ 630 nm	450 nm (2.76 eV), 600 nm (2.07 eV)
Emission maximum @ 470 nm exc.	765 nm (1.62 eV), 896 nm (1.38 eV)
Centroid wavelength	845 nm (1.47 eV)
Full width @ half emission maximum	Lines
Lumen equivalent	1 $lm/W_{opt.}$
CIE1931 chromaticity coordinates (x, y)	0.728, 0.272
Band edge of host lattice	4.6 eV
Reflection @ 450 nm	21%
Decay time $\tau_{1/e}$	

PHYSICAL PROPERTIES

Body colour	greenish
Density	6.2 g/cm^3
Refractive index (at λ)	
Mineral type	Magnetoplumbite
Crystal system	Hexagonal
Space group (#)	$P6_3/mmc$ (194)