



# Phosphor Information Leaflet

## GENERAL

Name	Lanthanum scandium gallium oxide chromium
Chemical formula	$\text{La}_3\text{Sc}_2\text{Ga}_3\text{O}_{12}:\text{Cr}^{3+}$
Application areas	Solid state laser

## OPTICAL PROPERTIES

Excitation maxima @ 780 nm	283 nm (4.38 eV), 488 nm (2.54 eV)
Emission maximum @ 480 nm exc.	815 nm (1.52 eV)
Centroid wavelength	786 nm (1.58 eV)
Full width @ half emission maximum	154 nm
Lumen equivalent	79.6 lm/W <sub>opt.</sub>
CIE1931 chromaticity coordinates (x, y)	0.562; 0.433
Band edge of host lattice	-
Reflection @ 480 nm	66 %
Decay time $\tau_{1/e}$	104 $\mu\text{s}$ (em. 708 nm; 300 K) 178 $\mu\text{s}$ (em. 708 nm ; 3 K)

## PHYSICAL PROPERTIES

Body colour	White
Density	5.7 g/cm <sup>3</sup>
Refractive index (at $\lambda$ )	
Mineral type	Garnets
Crystal system	Cubic
Space group (#)	<i>Ia-3d</i> (230)

