



Phosphor Information Leaflet

GENERAL

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

OPTICAL PROPERTIES

Excitation maxima @ 705 nm	435 nm (2.85 eV), 602 nm (2.06 eV)
Emission maximum @ 440 nm exc.	707 nm (1.75 eV)
Centroid wavelength	728 nm (1.70 eV)
Full width @ half emission maximum	73 nm
Lumen equivalent	347 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.727; 0.273
Band edge of host lattice	-
Reflection @ 440 nm	80 %
Decay time $\tau_{1/e}$	314 μs (em. 688 nm, 300 K) 2200 μs (em. 688 nm; 3 K)

PHYSICAL PROPERTIES

Body colour	Green
Density	-
Refractive index	2.0
Mineral type	Garnet
Crystal system	Cubic
Space group (#)	I 41/a m d Z (141)

