Phosphor Information Leaflet

GENERAL

Name	Lutetium aluminium garnet dysprosium
Chemical formula	$Lu_3Al_5O_{12}:Dy^{3+}$
Application areas	Luminescent marker

OPTICAL PROPERTIES

Excitation maxima @	326 nm (3.80 eV), 352 nm (3.52 eV), 365 nm (3.40 eV), 385 nm (3.22 eV), 447 nm (2.77 eV)
Emission maximum @ 352 nm exc.	483 nm (2.57 eV), 495 nm (2.51 eV), 582 nm (2.13 eV), 676 nm (1.83 eV), 763 nm (1.63 eV)
Centroid wavelength	568 nm (2.18 eV)
Full width @ half emission maximum	Line
Lumen equivalent	304 lm/W
CIE1931 chromaticity coordinates (x, y)	0.396, 0.391
Band edge of host lattice	160 nm (7.75 eV)
Reflection @ 352 nm	89%
Decay time $\tau_{1/e}$	~800µs

PHYSICAL PROPERTIES

Body colour	White
Density	6.70 g/cm^3
Refractive index (at λ)	1.84 (589 nm)
Mineral type	Garnet
Crystal system	Cubic
Space group (#)	I a -3 d (230)