Phosphor Information Leaflet

GENERAL

Name	Lutetium aluminium garnet erbium
Chemical formula	$Lu_3Al_5O_{12}:Er^{3+}$
Application areas	Laser gain media, luminescent marker

OPTICAL PROPERTIES

Excitation maxima @	255 nm (4.86 eV), 363 nm (3.42 eV), 380 nm (3.26 eV), 406 nm (3.05 eV), 449 nm (2.76 eV), 487 nm (2.55 eV)
Emission maximum @ 380 nm exc.	522 nm (2.38 eV), 540 nm (2.30 eV), 553 nm (2.24 eV), 677 nm (1.83 eV)
Centroid wavelength	636 nm (1.95 eV)
Full width @ half emission maximum	Lines
Lumen equivalent	403 $lm/W_{opt.}$
CIE1931 chromaticity coordinates (x, y)	0.327, 0.639
Band edge of host lattice	160 nm (7.75 eV)
Reflection @ 381 nm	80 %

PHYSICAL PROPERTIES

Body colour	White
Density	6.70 g/cm^3
Refractive Index (at λ)	1.84 (589.3 nm)
Mineral type	Garnet
Crystal system	Cubic
Space group (#)	I a -3 d (230)