



Phosphor Information Leaflet

GENERAL

Name	Yttrium aluminium garnet dysprosium
Chemical formula	$Y_3Al_5O_{12}:Dy^{3+}$
Application areas	Luminescent marker

OPTICAL PROPERTIES

Excitation maxima @	295 nm (4.20 eV), 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 @ 394 nm exc.	482 nm (2.57 eV), 496 nm (2.50 eV), 581 nm (2.13 eV), 590 nm (2.10 eV), 676 nm (1.83 eV), 762 nm (1.63 eV)
Centroid wavelength	564 nm (2.20 eV)
Full width @ half emission maximum	Lines
Lumen equivalent	306 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.389, 0.386
Band edge of host lattice	170 nm (7.29 eV)
Reflection @ 394 nm	79 %

PHYSICAL PROPERTIES

Body colour	White
Density	4.56 g/cm ³
Refractive index (at λ)	1.80 (589.3 nm)
Mineral type	Garnet
Crystal system	Cubic
Space group (#)	I a -3 d (230)

