



Phosphor Information Leaflet

GENERAL

Name	Yttrium aluminate garnet europium
Chemical formula	$Y_3Al_5O_{12}:Eu^{3+}$
Application areas	Luminescent marker

OPTICAL PROPERTIES

Excitation maxima @	394 nm (3.15 eV)
Emission maximum @ 394 nm exc.	590 nm (2.10 eV), 709 nm (1.75 eV)
Centroid wavelength	649 nm (1.91 eV)
Full width @ half emission maximum	Lines
Lumen equivalent	220 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.619, 0.377
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)

