



# Phosphor Information Leaflet

## GENERAL

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

## OPTICAL PROPERTIES

Excitation maxima @	250 nm (4.96 eV), 356 nm (3.48 eV), 460 nm (3.70 eV), 680 nm (1.82 eV)
Emission maximum @ 160 nm exc.	354 nm (3.50 eV), 460 nm (3.70 eV)
Centroid wavelength	
Full width @ half emission maximum	Lines
Lumen equivalent	
CIE1931 chromaticity coordinates (x, y)	
Band edge of host lattice	170 nm (7.29 eV)
Reflection @ 254 nm	75 %

## PHYSICAL PROPERTIES

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

