



Phosphor Information Leaflet

GENERAL

Name	Yttrium oxide europium
Chemical formula	$Y_2O_3:Eu^{3+}$
Application areas	FLs (tubular and compact), CRTs, PDPs

OPTICAL PROPERTIES

Excitation maxima @	254 nm (4.88 eV)
Emission maximum @ 254 nm exc.	611 nm (2.03 eV)
Centroid wavelength	622 nm (1.99 eV)
Full width @ half emission maximum	Line
Lumen equivalent	292 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.647, 0.348
Band edge of host lattice	215 nm (5.8 eV)
Reflection @ 254 nm	30 %
Decay time $\tau_{1/e}$	1 ms

PHYSICAL PROPERTIES

Body colour	White
Density	5.03 g/cm ³
Refractive index (at λ)	1.88 (500 nm)
Mineral type	Bixbyite
Crystal system	Cubic
Space group (#)	I a -3 (206)

