



Phosphor Information Leaflet

GENERAL

Name	Yttrium oxide ytterbium erbium
Chemical formula	$Y_2O_3:Yb^{3+},Er^{3+}$
Application areas	Up-conversion for NIR detection

OPTICAL PROPERTIES

Excitation maxima @ 661 nm em.	379 nm (3.27 eV), 522 nm (2.38 eV), 980 nm (1.27 eV)
Emission maximum @ 980 nm exc.	671 nm (1.87 eV)
Centroid wavelength	-
Full width @ half emission maximum	Lines
Lumen equivalent	54 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.64, 0.36
Band edge of host lattice	216 nm (5.75 eV)
Reflection @ 260 nm	5 %
Decay time 1/e	21 μs (λ _{Exc} 379 nm), 503 μs (λ _{Exc} 980 nm)

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)



