



Phosphor Information Leaflet

GENERAL

Name	Yttrium oxide sulphide ytterbium erbium
Chemical formula	$Y_2O_2S:Yb^{3+},Er^{3+}$
Application areas	Up-conversion for NIR detection

OPTICAL PROPERTIES

Excitation maxima @ 554 nm em.	260 nm (4.77 eV), 380 nm (3.26 eV), 528 nm (2.35 eV), 980 nm (1.27 eV)
Emission maximum @ 980 nm exc.	554 nm (2.24 eV), 671 nm (1.85 eV)
Centroid wavelength	-
Full width @ half emission maximum	Lines
Lumen equivalent	271 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.37, 0.62
Band edge of host lattice	270 nm (4.6 eV)
Reflection @ 260 nm	5 %
Decay time 1/e	1220 μs (λ _{Exc} 300 nm), 321 μs (λ _{Exc} 980 nm)

PHYSICAL PROPERTIES

Body colour	White
Density	4.9 g/cm ³
Refractive index (at λ)	2.1 – 2.3
Mineral type	
Crystal system	Trigonal
Space group (#)	P-3m1 (164)



