



Phosphor Information Leaflet

GENERAL

Name	Yttrium vanadate dysprosium
Chemical formula	$\text{YVO}_4:\text{Dy}^{3+}$
Application areas	Optical thermometry
Optical transition	$[\text{Xe}]4f^9 ({}^4F_{9/2}) - [\text{Xe}]4f^9 ({}^6H_{9/2 \text{ to } 15/2})$

OPTICAL PROPERTIES

Excitation maxima @ 630 nm	260 nm (4.77 eV)
Emission maximum @ 470 nm exc.	483 nm (2.57 eV), 576 nm (2.15 eV)
Centroid wavelength	562 nm (2.21 eV)
Full width @ half emission maximum	lines
Lumen equivalent	407 lm/W _{VIS}
CIE1931 chromaticity coordinates (x, y)	0.389; 0.433
Band edge of host lattice	300 nm (4.2 eV)
Reflection @ 254 nm	4%
Decay time $\tau_{1/e}$	0.9 ms

PHYSICAL PROPERTIES

Body colour	white
Density	4.25 g/cm ³
Refractive index (at λ)	1.958 (1064 nm)
Mineral type	Xenotime
Crystal system	Tetragonal
Space group (#)	I4 ₁ /amd (141)



