



# Phosphor Information Leaflet

## GENERAL

Name	Yttrium borate samarium
Chemical formula	YBO <sub>3</sub> :Sm <sup>3+</sup>
Application areas	Luminescent marker

## OPTICAL PROPERTIES

Excitation maxima @ 415 nm	346 nm (3.6 eV), 377 nm (3.3 eV), 405 nm (3,1 eV)
Emission maximum @ 160 nm exc.	570 nm (2.2 eV), 607 nm (2.0 eV), 655 nm (1.9 eV), 710 nm (1.7 eV)
Centroid wavelength	625 nm (2.0 eV)
Full width @ half emission maximum	lines
Lumen equivalent	284 lm/W <sub>VIS.</sub>
CIE1931 chromaticity coordinates (x, y)	0.596; 0.396
Band edge of host lattice	7.0 eV
Reflection @ 160 nm	-
Decay time $\tau_{1/e}$	~ 1 ms

## PHYSICAL PROPERTIES

Body colour	White
Density	4.5 g/cm <sup>3</sup>
Refractive index	1.51
Mineral type	Pseudo-vaterite
Crystal system	hexagonal
Space group (#)	P6 <sub>3</sub> /m (176)

