



# Phosphor Information Leaflet

## GENERAL

Name	Yttrium borate cerium
Chemical formula	YBO <sub>3</sub> :Ce
Application areas	Scintillator crystals

## OPTICAL PROPERTIES

Excitation maxima @ 415 nm	155 nm (8 eV), 165 nm (7.5 eV), 241 nm (5.1 eV)
Emission maximum @ 160 nm exc.	390 nm (3.2 eV), 419 nm (3 eV),
Centroid wavelength	422 nm (2.9 eV)
Full width @ half emission maximum	30 nm
Lumen equivalent	13 lm/W <sub>opt.</sub>
CIE1931 chromaticity coordinates (x, y)	0.165; 0.026
Band edge of host lattice	7.0 eV
Reflection @ 160 nm	-
Decay time $\tau_{1/e}$	< 1 $\mu$ s

## 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)

