



Phosphor Information Leaflet

GENERAL

Name	Lanthanum borate samarium
Chemical formula	LaBO ₃ :Sm ³⁺
Application areas	Security marking

OPTICAL PROPERTIES

Excitation maxima @	362 nm (3.43 eV), 375 nm (3.31 eV), 403 nm (3.08 eV), 416 nm (2.98 eV)
Emission maximum @ 403 nm exc.	562 nm (2.21 eV), 600 nm (2.07eV), 645 nm (1.92 eV)
Centroid wavelength	622 nm (1.99 eV)
Full width @ half emission maximum	Line
Lumen equivalent	294 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.591, 0.399
Band edge of host lattice	177 nm (7.00 eV)
Reflection @ 403 nm	95%

PHYSICAL PROPERTIES

Body colour	White
Density	5.24 g/cm ³
Refractive index (at λ)	1.85
Mineral type	Aragonite
Crystal system	Orthorhombic
Space group (#)	P m c n (62)

