



Phosphor Information Leaflet

GENERAL

Name	Barium magnesium aluminate europium
Chemical formula	BaMgAl ₁₀ O ₁₇ :Eu ²⁺
Application areas	Fluorescent lamps (illumination, jaundice treatment, pain release), Plasma displays
Optical transition	[Xe]4f ⁷ (⁸ S _{7/2}) – [Xe]4f ⁶ 5d ¹

OPTICAL PROPERTIES

Excitation maxima @	315 nm (3.94 eV)
Emission maximum @ 254 nm exc.	450 nm (2.76 eV)
Centroid wavelength	457 nm (2.71 eV)
Full width @ half emission maximum	50 nm
Lumen equivalent	64 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.147, 0.059
Band edge of host lattice	180 nm (6.9 eV)
Reflectance @ 254 nm	18%

PHYSICAL PROPERTIES

Body colour	White
Density	3.51 g/cm ³
Refractive index (at λ)	1.77 (589.3 nm)
Mineral type	β-Alumina
Crystal system	Hexagonal
Space group (#)	P 63/mmc (194)



