



Phosphor Information Leaflet

GENERAL

Name	Cerium magnesium hexaaluminate terbium
Chemical formula	CeMgAl ₁₁ O ₁₉ :Tb ³⁺
Application areas	Fluorescent lamps (colour 80 lamps)
Optical transition	Ce ³⁺ : [Xe]4f ¹ (² F _{5/2})-[Xe]5d ¹ Tb ³⁺ : [Xe]4f ⁸ (⁵ D ₄)-[Xe]4f ⁸ (⁷ F _J)

OPTICAL PROPERTIES

Excitation maxima @	291 nm (± 4.3 eV)
Emission maximum @ 450 nm exc.	485 nm (± 2.6 eV), 541 nm (± 2.3 eV), 583 nm (± 2.1 eV), 622 nm (± 2.0 eV)
Centroid wavelength	579 nm (± 1.9 eV)
Full width @ half emission maximum	lines
Lumen equivalent	421 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.337, 0.594
Band edge of host lattice	~7.5 eV
Reflectance @ 254 nm	10 %
Decay time τ _{1/e}	7.0 ms

PHYSICAL PROPERTIES

Body colour	White
Density	4.3 g/cm ³
Refractive index (at λ)	
Mineral type	Magnetoplumbite
Crystal system	Hexagonal
Space group (#)	P6 ₃ /mmc (194)



