

Phosphor Information Leaflet

GENERAL

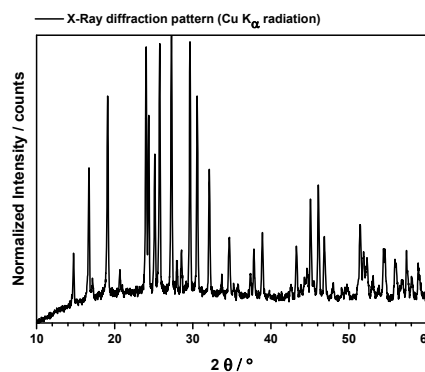
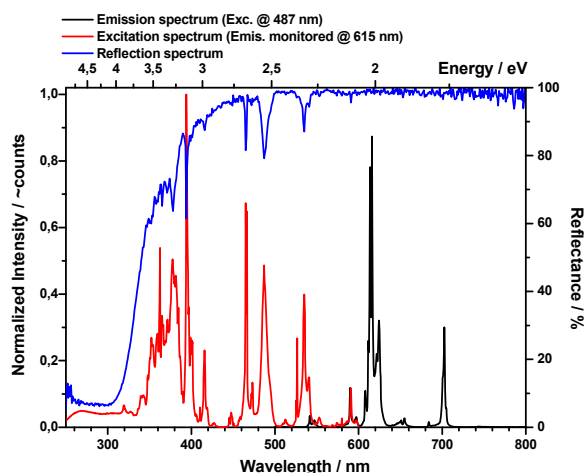
Name	Terbium trimolybdate europium
Chemical formula	Tb ₂ Mo ₃ O ₁₂ :Eu ³⁺ (20%)
Application areas	Colour converter in near UV or blue LEDs

OPTICAL PROPERTIES

Excitation maxima @	394 nm (3.15 eV), 465 nm (2.67 eV), 487 nm (2.55 eV)
Emission maximum @ 487 nm exc.	616 nm (2.01 eV)
Centroid wavelength	624 nm (1.99 eV)
Full width @ half emission maximum	Lines
Lumen equivalent	271 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.660, 0.340
Band edge of host lattice	340 nm (3.65 eV)
Reflection @ 487 nm	79 %
Decay time 1/e	≈ 0.6 ms
Thermal quenching T _{1/2}	≈ 630 K (360 °C)

PHYSICAL PROPERTIES

Body colour	Reddish white
Density	4.6 g/cm ³
Refractive index	≈ 2
Mineral type	
Crystal system	Orthorhombic
Space group (#)	<i>Pba</i> 2 (32)



Literatur: F. Baur, F. Glocker, T. Jüstel, J. Mater. Chem. C, 2015,3, 2054-2064
 "Photoluminescence and energy transfer rates and efficiencies in Eu³⁺ activated Tb₂Mo₃O₁₂"