



## Phosphor Information Leaflet

### GENERAL

Name	Barium orthosilicate europium
Chemical formula	Ba <sub>2</sub> SiO <sub>4</sub> :Eu <sup>2+</sup>
Application areas	Light emitting diodes, optical marker
Optical transition	[Xe]4f <sup>7</sup> – [Xe]4f <sup>6</sup> 5d <sup>1</sup>

### OPTICAL PROPERTIES

Excitation maxima @	399 nm (3.1 eV)
Emission maximum @ 160 nm exc.	508 nm (2.4 eV)
Centroid wavelength	518 nm (2.3 eV)
Full width @ half emission maximum	60 nm
Lumen equivalent	374 lm/W <sub>VIS.</sub>
CIE1931 chromaticity coordinates (x, y)	0.167, 0.563
Band edge of host lattice	7.0 eV
Reflection @ 254 nm	5 %
Decay time τ <sub>1/e</sub>	800 ns

### PHYSICAL PROPERTIES

Body colour	Yellow
Density	5.23 g/cm <sup>3</sup>
Refractive index (at λ)	1.805 (490 nm)
Mineral type	Olivin
Crystal system	Orthorhombic
Space group (#)	Pnma (62)



