



# Phosphor Information Leaflet

## GENERAL

Name	Barium silicium nitride europium
Chemical formula	Ba <sub>2</sub> Si <sub>5</sub> N <sub>8</sub> :Eu <sup>2+</sup>
Application areas	Light emitting diodes, indicator lamps
Optical transition	[Xe]4f <sup>7</sup> ( <sup>8</sup> S <sub>7/2</sub> ) – [Xe]4f <sup>6</sup> 5d <sup>1</sup>

## OPTICAL PROPERTIES

Excitation maxima @	307 nm (4.0 eV), 410 nm (3.0 eV)
Emission maximum @ 160 nm exc.	611 nm (2.0 eV)
Centroid wavelength	627 nm (2.0 eV)
Full width @ half emission maximum	90 nm
Lumen equivalent	280 lm/W <sub>VIS</sub>
CIE1931 chromaticity coordinates (x, y)	0.597, 0.402
Band edge of host lattice	300 nm (4.1 eV)
Reflection @ 254 nm	12 %
Decay time 1/e	-

## PHYSICAL PROPERTIES

Body colour	orange
Density	4.63 g/cm <sup>3</sup>
Refractive index (at λ)	> 2.5
Mineral type	-
Crystal system	Orthorhombic
Space group (#)	Pmn2 <sub>1</sub> (31)

