



## Phosphor Information Leaflet

### GENERAL

Name	Strontium silicon nitride europium
Chemical formula	$\text{Sr}_2\text{Si}_5\text{N}_8:\text{Eu}^{2+}$
Application areas	Light emitting diodes
Optical transition	$[\text{Xe}]4f^7 (^8\text{S}_{7/2}) - [\text{Xe}]4f^65d^1$

### OPTICAL PROPERTIES

Excitation maxima @	258 nm (4.8 eV), 440 nm (2.8 eV)
Emission maximum @ 160 nm exc.	625 nm (2.0 eV)
Centroid wavelength	645 nm (1.9 eV)
Full width @ half emission maximum	95 nm
Lumen equivalent	199 lm/W <sub>opt.</sub>
CIE1931 chromaticity coordinates (x, y)	0.636, 0.363
Band edge of host lattice	315 nm (3.9 eV)
Reflection @ 254 nm	9 %
Decay time 1/e	~ 1 μs

### PHYSICAL PROPERTIES

Body colour	Orange-red
Density	3.9 g/cm <sup>3</sup>
Refractive index (at λ)	2.55 (589.3 nm)
Mineral type	-
Crystal system	Orthorhombic
Space group (#)	Pmn2 <sub>1</sub> (31)

