



# Phosphor Information Leaflet

## GENERAL

Name	Dilithium strontium silicate praseodymium
Chemical formula	$\text{Li}_2\text{SrSiO}_4:\text{Pr}^{3+}$
Application areas	Surface disinfection, $\text{Xe}_2^*$ discharge lamps
Optical transitions	$[\text{Xe}]4f^{15}d^1 - [\text{Xe}]4f^2 ({}^3\text{H}_J)$ (UV range) $[\text{Xe}]4f^2 ({}^3\text{P}_J, {}^1\text{D}_2) - [\text{Xe}]4f^2 ({}^3\text{H}_J)$ (VIS range)

## OPTICAL PROPERTIES

Excitation maxima @	207 nm ( $\pm 5.99$ eV), 247 nm ( $\pm 4.87$ eV)
Emission maximum @ 160 nm exc.	267 nm ( $\pm 4.64$ eV), 315 nm ( $\pm 3.94$ eV)
Centroid wavelength	388 nm ( $\pm 3.20$ eV)
Full width @ half emission maximum	Lines
Lumen equivalent	198 lm/W <sub>VIS</sub>
CIE1931 chromaticity coordinates (x, y)	0.444, 0.368
Band edge of host lattice	161 nm ( $\pm 7.7$ eV)
Reflection @ 254 nm	17 %
Decay time 1/e	~ 25 ns

## PHYSICAL PROPERTIES

Body colour	Greenish
Density	3.54 g/cm <sup>3</sup>
Refractive index (at $\lambda$ )	-
Mineral type	-
Crystal system	Trigonal
Space group (#)	P3 <sub>1</sub> 21 (152)



