

# Phosphor Information Leaflet

## GENERAL

Name	Lithium yttrium fluoride thulium
Chemical formula	LiYF <sub>4</sub> :Tm
Application areas	Optical marker

## OPTICAL PROPERTIES

Excitation maxima @ 451 nm	259 nm (4.8 eV), 354 nm (3.5 eV)
Emission maximum @ 358 nm exc.	451 nm (2.7 eV), 657 nm (1.9 eV), 741 nm (1.7 eV), 793 nm (1.6 eV)
Centroid wavelength	599 nm (2.1 eV)
Full width @ half emission maximum	lines
Lumen equivalent	28 lm/W <sub>opt.</sub>
CIE1931 chromaticity coordinates (x, y)	0.171; 0.031
Band edge of host lattice	7.95 eV
Reflection @ 358 nm	77 %
Decay time $\tau_{1/e}$	-

## PHYSICAL PROPERTIES

Body colour	white
Density	3.9 g/cm <sup>3</sup>
Refractive index	1.5
Mineral type	scheelite
Crystal system	Trigonal
Space group (#)	<i>I</i> <sub>4</sub> <i>1</i> / <i>a</i> <i>Z</i>

