



Phosphor Information Leaflet

GENERAL

Name	Aluminium Oxide Chromium
Chemical formula	Al ₂ O ₃ :Cr ³⁺
Application areas	Laser gain media, colour pigment

OPTICAL PROPERTIES

Excitation maxima @	250 nm (4.96 eV), 410 nm (3.02 eV), 557 nm (2.23 eV)
Emission maximum @ 410 nm exc.	694 nm (1.79 eV)
Centroid wavelength	709 nm (1.75 eV)
Full width @ half emission maximum	Line
Lumen equivalent	5 lm/W _{opt.}
CIE1931 chromaticity coordinates (x, y)	0.723, 0.277
Band edge of host lattice	145 nm (8.7 eV)
Reflection @ 410 nm	50 %
Decay time τ _{1/e}	497 μs

PHYSICAL PROPERTIES

Body colour	Light magenta
Density	3.98 g/cm ³
Refractive index (at λ)	1.76 (589.3 nm)
Mineral type	Corundum
Crystal system	Trigonal
Space group (#)	R -3 c H (#167)

