

Crystaltechno Ltd. offers grown in house

Al₂O₃ Single Crystals Doped with Cr (Ruby Single Crystals, Cr:Sapphire (Al₂O₃ : Cr³⁺))

For Laser Technics and Jeweler Industry

Sapphire doped with chrome (Cr³⁺) (ruby) is applied as an active medium in laser systems.

Chemical formula	Al ₂ O ₃ : Cr ³⁺
Dopant concentration, at. %	0,5÷2,0
Crystal structure	hexagonal
Lattice cell parameters, Å	a = 4,765 c = 13,001
Density, g/cm ³	3,98
Melting point, ° C	2050
Mohs' hardness	9
Index of refraction	no 1,768 ne 1,760
Laser transition	² E(E) → ⁴ A ₂
Emission wavelength, μm	0,6943
Luminescence life time, ms	4,3
Thermal expansion coefficient at (25 – 50) °C, K ⁻¹	parallel to c axis 6,6 · 10 ⁻⁶ perpendicular to c axis 5,0 · 10 ⁻⁶
Thermal conductivity, W/(cm K)	0,33
Maximal dimensions of crystals, mm	150 x 250 x 25

*If you are interested please feel free to contact us!
You can receive the additional information*

e-mail: sales@crystaltechno.com