

Crystaltechno Ltd. offers grown in house

Neodymium-doped Yttrium Aluminum Garnet Crystals (YAG:Nd)

For Laser Technics

Yttrium aluminum garnet (YAG) is commonly used as a host material in various solid-state lasers. Neodymium is doped into YAG as active laser ions for creation of Nd:YAG lasers active media.

Chemical formula, crystal : activator	$Y_3Al_5O_{12} : Nd^{3+}$
Activator concentration, at. %	0,5÷1,2
Crystal structure	cubic
Lattice cell parameters, Å	12,008
Density, g/cm ³	4,55
Melting point, ° C	1970
Mohs' hardness	8,5
Index of refraction	1,815
Optical transparency region, µm	0,24 – 4,6
Laser transition	$^4F_{3/2} \rightarrow ^4I_{11/2}$
Emission wavelength, µm	1,064
Luminescence life time, ms	1,12
Linear coefficient of thermal expansion at (0 – 250) °C, K ⁻¹	$(0,8 – 0,9) \cdot 10^{-6}$
Thermal conductivity at 20 °C, W/(cm K)	0,14
Growth direction of crystal	[111]
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