

Yttrium-Aluminium-Granat (YAG)
für VIS und IR-Bereich

Yttrium-Aluminum-Garnet (YAG)
for VIS and IR-range

Formula	Y ₃ Al ₅ O ₁₂				
Growth method	Czochalski technique				
Max. sizes, (mm)	80				
Transmission range, (µm) (Thickness 10 mm)	0.3 - 5.0				
Structure	cubic				
Density (g/cm ³)	4.55				
Melting point (°C)	1950				
Hardness (Mohs)	8-8.5				
Thermal expansion coefficient (10 ⁻⁶ /K)	6.9				
Thermal conductivity (W m ⁻¹ K ⁻¹)	13				
Specific heat capacity (J kg ⁻¹ K ⁻¹)	627				
Solubility in water (g/100 cm ³)	insoluble				
Solubility in acids	unessential				
Solubility in organic solvents	-				
Wavelength (µm)	0.5	1.0	2.0	3.0	4.0
Refractive index	1.8450	1.8197	1.8035	1.7855	1.7602
Absorption coefficient (cm ⁻¹)	0.06 at 0.36 µm 0.02 at 0.4 µm 0.01 at 1.15 µm				

Transmission spectrum:

