

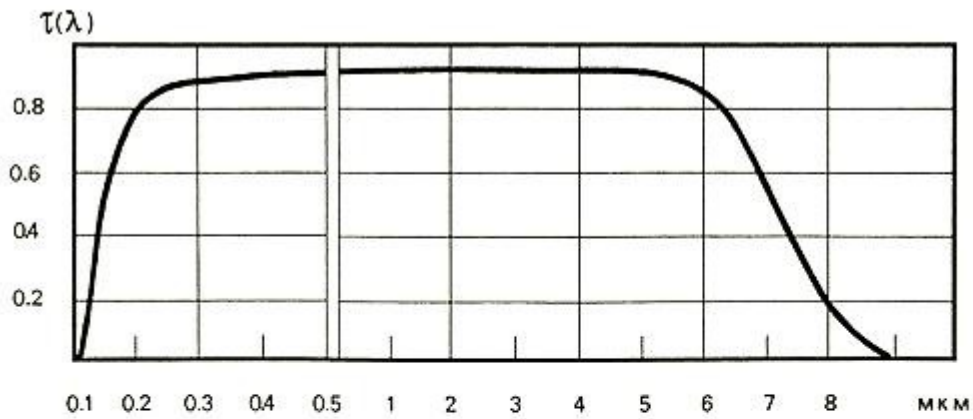
1. Crystallographic characteristics

Crystal system group	Class	Lattice parameters		Cleavage
		a	c	
Tetragonal	4/mmm	4.64	3.06	Imperfect along (100), (110)

2. Optical characteristics

n_e		$n_F - n_C'$		Internal transmittance coefficient		Refractive index	
n_o	n_e	n_o	n_e	$l, \text{ mkm}$	$\tau_i(l)$	$l, \text{ mkm}$	n_o/n_e
1.3786	1.3904	0.0034	0.0110				
Attenuation coefficient $\kappa(1), \text{ cm}^{-1}$, less than						0.2	1.4231 1.4367
MF-U		MF-I				0.5	1.3797 1.3916
0.07 (0.2 mkm)		0.02 (5.0 mkm)		0.2	0.95	1.0	1.3736 1.3852
Thermal coefficient of refractive index для $\lambda = 3.39 \text{ mkm}$, $10^{-5} \text{ }^\circ\text{C}^{-1}$ in range of $\pm 60^\circ\text{C}$		Transparency range, mkm (10 mm width)		0.5	0.97	2.0	1.3686 1.3797
				1.0	0.97	3.0	1.3618
				3.0	0.97	4.0	1.3724 1.3525
				5.0	0.91	5.0	1.3622 1.3400
				6.0	0.54	6.0	1.3487 1.3242
				7.0	0.12	7.0	1.3315 1.3044 1.3101
$b_o = (0.15 - 0.10)$; $b_e = (0.10 - 0.04)$		0.13 - 7.0					

Transmission spectrum



3. Thermal characteristics

Thermal expansion $\alpha_t \cdot 10^6, ^\circ\text{C}^{-1}$	Thermal conductivity, $\text{W}/(\text{m} \cdot ^\circ\text{C})$	Specific heat, 10^3 $\text{J}/(\text{kg} \cdot ^\circ\text{C})$	Heat resistance, $^\circ\text{C}$	Melting Point, $^\circ\text{C}$
in range of \pm 60°C	при 27°C			
λ c axis 6.23 – 9.25 μm c axis 10.86–14.54	-	0.9200	-	1255

4. Mechanical characteristics

Density at 18°C, g/cm ³	Hardness/Mohs	Microhardness, 10 ⁷ Pa		Elastic compliance constants, 10 ⁻¹² Pa ⁻¹					
		KK C axis	^ c axis	S ₁₁	S ₁₂	S ₁₃	S ₃₃	S ₄₄	S ₆₆
3.18	6	441	289	12.45	7.16	1.66	5.94	17.54	10.53
Modulus of elasticity E, in direction E, 10 ¹⁰ Pa		Shear modulus G, in plane G, 10 ¹⁰ Pa		Transverse deformation coefficient u					
KK C axis	^ c axis	KK C axis	^ c axis	KK C axis	^ c axis				
					in plane				
					KK C axis	^ c axis			
16.91	7.97	5.71	9.52	0.577	0.130		0.276		

Optic stresses coefficient		Photoelastic constants		Piezooptic constants at l = 0.546 mkm, 10 ⁻¹² Pa ⁻¹				
at l = 0.546 mkm, 10 ⁻¹² Pa ⁻¹								
B ₁	B ₂	C ₁	C ₂	P ₁₁ ⁻ P ₁₂	P ₁₁ ⁻ P ₃₁	P ₃₃ ⁻ P ₁₃	P ₄₄	P ₆₆
2.29	0.67	-	-	1.76	1.14	0.52	1.35	0.51

5. Chemical stability

Solubility		
in water at 18°C, g/100 cm ³	in acids	in organic solvents
0.0076	soluble	insoluble in spirits