FUSED SILICA IR Grade SiO2

Optical SiO2 (Fused Silica IR Grade)

Refractive Index at n_e	1.4601
Refractive Index at $n_{F'}$-$n_{C'}$	0.0068
Refractive Index at n_D	1.4584
Thermal Coefficient of Refractive Index at n_e, $^oC^{-1}$ for +20°C	$10 \cdot 10^{-6}$
Transmission Range, microns (thickness 10мм)	0.18,3.5
Transmittance $t_i(l)$ vs. wavelength l	

Internal Transmittance $t_i(l)$ vs. wavelength l	
l,мкм	$t_i(l)$
0.220	0.220
0.230	0.435
0.240	0.525
0.260	0.800
0.270	0.930
0.280	0.999
0.700	0.999
1.000	0.999
1.500	0.999
2.000	0.999
2.720	0.999
2.800	0.955
2.900	0.900
3.000	0.870
3.750	0.180

Refractive Index n vs. wavelength l	
l,мкм	n(l)
0.1700	1.615
0.1850	1.575
0.2000	1.550
0.2144	1.5337
0.2803	1.4940
0.3021	1.4872
0.3650	1.4745
0.4046	1.4696
0.4358	1.4666
0.5461	1.4601
0.5876	1.4585
0.5893	1.4584
0.6438	1.4567
0.6563	1.4564
0.8621	1.4525
1.0830	1.4494
1.3950	1.4458
1.7091	1.4421
2.0581	1.4372
3.2439	1.4131

Thermal SiO2 (Fused Silica IR Grade)

Thermal Linear Expansion a_t, $^oC^{-1}$ for 0,+50°C	$4.0 \cdot 10^{-6}$
Thermal Conductivity, W/(m • °C) at 20 °C	1.35
Specific Heat Capacity, J/(kg • °C)	728.0
Melting Point, °C	1900

Mechanical SiO2 (Fused Silica IR Grade)

Density, g/cm^3 at 20 °C	2.21
Poisson Ratio	0.17
Young Modulus (E), Pa	$7.36 \cdot 10^{10}$
Shear Modulus (G), Pa	$3.14 \cdot 10^{10}$

Chemical SiO2 (Fused Silica IR Grade)

Solubility SiO2	
in water	in acids
insoluble	insoluble

"Opto-Technological Laboratory" produces lenses, windows, prisms, wedges, ball lenses, cylindrical lenses and others optical components according to customers' specifications and drawings out of fused silica IR grade .