

Fused Silica IR Grade (SiO₂)

Custom sizes and specifications are available

OPTICAL

Refractive Index at n_e	1.4601
Refractive Index $n_F - n_C$	0.0068
Refractive Index at n_D	1.4584
Refractive Index $n_F - n_C$	0.0068
Thermal Coefficient of Refractive Index at n_C for +20 deg C	100×10^{-7}
Transmission Range, microns	0.18-3.5

THERMAL

Thermal Linear Expansion, deg C-1 for 0/+50 deg C	4.0×10^{-6}
Thermal Conductivity, W/(m•deg C) at 20 deg C	1.35
Specific Heat Capacity, J/(kg•deg C)	0.728×10^3
Melting Point, deg C	1900

MECHANICAL

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

CHEMICAL

Solubility	
in water, gram/100 cm ³	insoluble
in acids	insoluble

Refr. Index n vs. Wavelength λ

WAVELENGTH, MICRONS	REFRACTIVE INDEX
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

Internal Transmittance τ_i (λ) vs. Wavelength λ

WAVELENGTH, MICRONS	INTERNAL TRANSMITTANCE
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

