

IRG204 Se63As30Sb4Sn3

$n_{10.6} = 2.7659$

$\nu_{10.6} = 132.77$

$n_g - n_{12.5} = 0.0133$

Refractive Indices

λ (μm)	n_λ
2.0	2.8095
3.0	2.7914
4.0	2.7846
5.0	2.7808
6.0	2.7779
7.0	2.7754
8.0	2.7730
9.0	2.7704
10.0	2.7677
11.0	2.7647
12.0	2.7614
12.5	2.7597
13.0	2.7578
14.0	2.7538

Constants of Dispersion Formula

A	2.7790481E+00
B	1.1911498E-01
C	1.5043403E-02
D	-1.2268557E-04
E	-1.0906501E-08
F	-1.8517301E-10

Other Properties

ρ (g/cm ³)	4.72
ϵ_r	

Chemical Properties (grade)

RC(S)	1
RA(S)	1
D _W	2
D _A	1
R _{OH} (S)	2
RP(S)	1

Thermal Properties

T _g (°C)	174
T _s (°C)	199
$\alpha_{-60/120^\circ\text{C}}$ (10 ⁻⁷ /K)	209
$\alpha_{20/120^\circ\text{C}}$ (10 ⁻⁷ /K)	212
C _p (J/g·K)	

Mechanical Properties

HK (10 ⁷ Pa)	115
E (GPa)	19.8
G (GPa)	7.3
μ	0.37

Temperature Coefficients of Refractive Index (-40 ~ 80°C) (×10⁻⁶ /°C)

λ (μm)	dn _{rel} /dt
3	21
5	19
8	18
10	18
12	17

Expansion Coefficient α (×10⁻⁷/K)

°C	α
-50/-40	202
-40/-30	205
-30/-20	206
-20/-10	207
-10/0	208
0/10	208
10/20	209
20/30	209
30/40	210
40/50	210
50/60	211
60/70	211
70/80	212
80/90	212
90/100	213
100/110	213
110/120	214
120/130	215
130/140	216
140/150	217
150/160	217

Internal Transmittance

λ (μm)	τ 2mm
17.0	0.840
16.0	0.896
15.0	0.897
14.0	0.897
13.0	0.951
12.5	0.977
12.0	0.987
11.0	0.990
10.0	0.993
9.5	0.995
9.0	0.996
8.5	0.997
8.0	0.997
7.5	0.996
7.0	0.996
6.5	0.997
6.0	0.996
5.5	0.996
5.0	0.996
4.5	0.996
4.0	0.997
3.5	0.997
3.0	0.996
2.5	0.997
2.0	0.995
1.5	0.995
1.0	0.923

Constants of dn/dt

D ₀	1.39794E-05
D ₁	6.65805E-08
D ₂	-1.61120E-10
E ₀	3.04933E-05
E ₁	8.15250E-08
λ_{TK}	-7.27149E-01

Transmittance τ (2mm)

