

H-ZF4	728283	$n_d = 1.72825$	$v_d = 28.32$	$n_F - n_C = 0.025716$
		$n_e = 1.73432$	$v_e = 28.10$	$n_{F'} - n_{C'} = 0.026133$

Refractive Indices		
	λ (nm)	n_λ
n_{2325}	2325.42	1.67946
n_{1970}	1970.09	1.68559
n_{1530}	1529.58	1.69277
n_{1129}	1128.64	1.70031
n_{1064}	1064.00	1.70186
n_t	1013.98	1.70320
n_s	852.11	1.70875
$n_{A'}$	768.19	1.71285
n_r	706.52	1.71677
n_C	656.27	1.72082
$n_{C'}$	643.85	1.72198
n_{He-Ne}	632.80	1.72307
n_D	589.29	1.72803
n_d	587.56	1.72825
n_e	546.07	1.73432
n_F	486.13	1.74654
$n_{F'}$	479.99	1.74811
n_g	435.84	1.76215
n_h	404.66	1.77615
n_i	365.01	1.80264

Constants of Dispersion Formula	
A_0	2.87833860E+00
A_1	-1.18585043E-02
A_2	3.41292688E-02
A_3	1.67815401E-03
A_4	-5.56455694E-05
A_5	1.43620134E-05

Density		Solarization	
ρ (g/cm ³)	3.05	$\Delta\lambda$ (%)	-0.4

Relative Partial Dispersion	
$P_{d,C}$	0.2889
$P_{e,d}$	0.2360
$P_{g,F}$	0.6070
$P'_{d,c'}$	0.2399
$P'_{e,d}$	0.2323
$P'_{g,F'}$	0.5373

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	0.0006
$\Delta P_{g,F}$	0.0105
$\Delta P_{C,t}$	0.0078
$\Delta P_{C,s}$	0.0010

Thermal Properties	
T _g (°C)	610
T _s (°C)	641
T ₁₀ ^{14.5} (°C)	546
T ₁₀ ¹³ (°C)	575
$\alpha_{50/80^\circ C}$ (10 ⁻⁷ /K)	87
$\alpha_{100/300^\circ C}$ (10 ⁻⁷ /K)	107
λ (W/(m·K))	1.18

Mechanical Properties	
HK (10 ⁷ Pa)	548
F _A	158
E (GPa)	87.4
G (GPa)	34.8
μ	0.257
σ_b (MPa)	79.3
B (10 ⁻¹² /Pa)	2.76

Chemical Properties (grade)	
RC (S)	1
RA (S)	1
D _W	1
D _A	1
R _{OH} (S)	1
RP (S)	1

Expansion Coefficient α (×10 ⁻⁷ /K)	
°C	α
-50/-40	80
-40/-30	82
-30/-20	84
-20/-10	86
-10/0	88
0/10	89
10/20	90
20/30	91
30/40	91
40/50	92
50/60	92
60/70	93
70/80	95
80/90	96
90/100	97
100/110	98
110/120	99
120/130	100
130/140	101
140/150	103
150/160	104

Internal Transmittance		
λ (nm)	τ_{5mm}	τ_{10mm}
2400	0.942	0.887
2200	0.963	0.927
2000	0.994	0.989
1800	0.998	0.996
1600	0.998	0.996
1400	0.998	0.996
1200	0.998	0.996
1060	0.998	0.996
1000	0.998	0.996
950	0.998	0.996
900	0.998	0.996
850	0.998	0.996
800	0.998	0.996
750	0.998	0.996
700	0.998	0.996
650	0.998	0.996
600	0.996	0.992
550	0.994	0.989
500	0.992	0.985
480	0.990	0.980
460	0.987	0.976
440	0.981	0.966
420	0.969	0.942
400	0.930	0.867
390	0.876	0.769
380	0.748	0.563
370	0.460	0.213
360		
350		
340		
330		
320		
310		
300		
290		
280		

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	415/365
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	392/364

Range of Temperature (°C)	Temperature Coefficients of Refractive Index									
	dn/dt relative (×10 ⁻⁶ / °C)									
	t	s	C	C'	He-Ne	d	e	F	F'	g
-60 ~ -40	0.4	0.7	1.1	1.2	1.3	1.6	2.0	3.1	3.2	3.9
-40 ~ -20	0.4	0.7	1.2	1.2	1.3	1.5	2.0	3.2	3.3	4.2
-20 ~ 0	0.4	0.8	1.3	1.3	1.4	1.7	2.3	3.3	3.3	4.5
0 ~ 20	0.4	0.8	1.3	1.3	1.4	1.9	2.4	3.6	3.7	4.9
20 ~ 40	0.4	0.8	1.4	1.4	1.5	1.9	2.5	3.8	3.8	5.1
40 ~ 60	0.5	0.9	1.5	1.6	1.7	2.1	2.6	4.0	4.1	5.3
60 ~ 80	0.5	1.0	1.6	1.7	1.8	2.2	2.9	4.2	4.3	5.7
80 ~ 100	0.5	1.0	1.7	1.8	1.9	2.3	3.0	4.4	4.5	5.9
100 ~ 120	0.6	1.1	1.9	1.9	2.0	2.3	3.1	4.6	4.6	6.1
120 ~ 140	0.7	1.2	2.0	2.0	2.1	2.6	3.3	4.7	4.7	6.0
140 ~ 160	0.7	1.3	2.1	2.1	2.2	2.6	3.5	4.8	4.9	6.3

Constants of dn/dt		
D ₀	D ₁	D ₂
-3.28E-06	1.15E-08	-2.60E-11
E ₀	E ₁	λ_{TK}
1.09E-06	1.15E-09	2.56E-01