

H-ZF1	648338	$n_d = 1.64769$	$v_d = 33.84$	$n_F - n_C = 0.019140$
		$n_e = 1.65222$	$v_e = 33.58$	$n_{F'} - n_{C'} = 0.019421$

Refractive Indices		
	λ (nm)	n_λ
n_{2325}	2325.42	1.60836
n_{1970}	1970.09	1.61379
n_{1530}	1529.58	1.62001
n_{1129}	1128.64	1.62623
n_{1064}	1064.00	1.62748
n_t	1013.98	1.62854
n_s	852.11	1.63287
$n_{A'}$	768.19	1.63603
n_r	706.52	1.63903
n_C	656.27	1.64210
$n_{C'}$	643.85	1.64298
n_{He-Ne}	632.80	1.64380
n_D	589.29	1.64753
n_d	587.56	1.64769
n_e	546.07	1.65222
n_F	486.13	1.66124
$n_{F'}$	479.99	1.66240
n_g	435.84	1.67254
n_h	404.66	1.68249
n_i	365.01	1.70101

Constants of Dispersion Formula	
A_0	2.63790882E+00
A_1	-1.02830084E-02
A_2	2.41578002E-02
A_3	1.47633602E-03
A_4	-1.10620627E-04
A_5	1.23442258E-05

Density		Solarization	
ρ (g/cm ³)	2.73	$\Delta\lambda$ (%)	0.0

Relative Partial Dispersion	
$P_{d,C}$	0.2921
$P_{e,d}$	0.2367
$P_{g,F}$	0.5904
$P'_{d,c'}$	0.2425
$P'_{e,d}$	0.2333
$P'_{g,F'}$	0.5221

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	-0.0003
$\Delta P_{g,F}$	0.0030
$\Delta P_{C,t}$	0.0044
$\Delta P_{C,s}$	0.0006

Thermal Properties	
Tg (°C)	534
Ts (°C)	566
T ₁₀ ^{14.5} (°C)	485
T ₁₀ ¹³ (°C)	525
$\alpha_{50/80^\circ C}$ (10 ⁻⁷ /K)	97
$\alpha_{100/300^\circ C}$ (10 ⁻⁷ /K)	122
λ (W/(m·K))	0.95

Mechanical Properties	
HK (10 ⁷ Pa)	520
F _A	145
E (GPa)	80.5
G (GPa)	32.3
μ	0.247
σ_b (MPa)	96.6
B (10 ⁻¹² /Pa)	2.59

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	87
-40/-30	91
-30/-20	92
-20/-10	94
-10/0	95
0/10	96
10/20	97
20/30	98
30/40	98
40/50	99
50/60	100
60/70	101
70/80	103
80/90	104
90/100	105
100/110	107
110/120	108
120/130	109
130/140	112
140/150	115
150/160	119

Internal Transmittance		
λ (nm)	τ_{5mm}	τ_{10mm}
2400	0.923	0.853
2200	0.945	0.893
2000	0.981	0.962
1800	0.992	0.984
1600	0.999	0.998
1400	0.999	0.998
1200	0.999	0.998
1060	0.999	0.998
1000	0.999	0.998
950	0.999	0.998
900	0.999	0.998
850	0.999	0.998
800	0.999	0.998
750	0.999	0.998
700	0.999	0.998
650	0.999	0.998
600	0.999	0.998
550	0.999	0.998
500	0.999	0.998
480	0.998	0.996
460	0.997	0.993
440	0.996	0.990
420	0.994	0.985
400	0.983	0.963
390	0.966	0.929
380	0.917	0.838
370	0.773	0.594
360	0.434	0.189
350		
340		
330		
320		
310		
300		
290		
280		

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	390/360
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	378/354

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	-0.9	-0.8	-0.6	-0.6	-0.5	-0.2	0.3	1.2	1.3	1.6
-40 ~ -20	-0.7	-0.7	-0.5	-0.5	-0.3	0.0	0.5	1.4	1.4	2.0
-20 ~ 0	-0.6	-0.5	-0.4	-0.3	0.0	0.2	0.7	1.5	1.6	2.3
0 ~ 20	-0.4	-0.3	-0.3	-0.2	0.1	0.4	0.9	1.6	1.7	2.6
20 ~ 40	-0.3	-0.2	-0.2	-0.1	0.3	0.5	1.0	1.7	1.7	2.8
40 ~ 60	-0.3	-0.2	0.1	0.1	0.4	0.6	1.3	1.9	1.9	3.1
60 ~ 80	-0.3	-0.1	0.3	0.3	0.5	0.8	1.5	2.2	2.2	3.4
80 ~ 100	-0.2	0.2	0.5	0.5	0.6	0.9	1.7	2.5	2.5	3.8
100 ~ 120	0.0	0.4	0.6	0.7	0.8	1.1	1.9	2.8	2.8	4.1
120 ~ 140	0.2	0.5	0.8	0.9	0.9	1.2	2.1	3.1	3.1	4.4
140 ~ 160	0.3	0.7	1.0	1.0	1.1	1.4	2.2	3.4	3.5	4.8

Constants of dn/dt		
D ₀	D ₁	D ₂
-5.06E-06	1.53E-08	-1.99E-11
E ₀	E ₁	λ_{TK}
7.46E-07	8.91E-10	2.96E-01