H-ZF50 741278

$n_d = 1.74077$	$\upsilon_d = 27.76$	$n_F - n_C = 0.026685$
$n_e = 1.74707$	$\upsilon_e = 27.54$	$n_{F'} - n_{C'} = 0.027125$

Refractive Indices		
	λ (nm)	n_λ
n_{2325}	2325.42	1.69064
n_{1970}	1970.09	1.69692
n_{1530}	1529.58	1.70426
n_{1129}	1128.64	1.71195
n_{1064}	1064.00	1.71354
n_t	1013.98	1.71491
n_s	852.11	1.72060
$n_{A'}$	768.19	1.72483
n_r	706.52	1.72888
n_C	656.27	1.73307
$n_{C'}$	643.85	1.73427
n_{He-Ne}	632.80	1.73540
n_D	589.29	1.74054
n_d	587.56	1.74077
n_e	546.07	1.74707
n_F	486.13	1.75976
$n_{F'}$	479.99	1.76139
n_g	435.84	1.77598
n_h	404.66	1.79059
n_i	365.01	1.81850

Relative Partial Dispersion	
$P_{d,C}$	0.2886
$P_{e,d}$	0.2361
$P_{g,F}$	0.6078
$P'_{d,c'}$	0.2396
$P'_{e,d}$	0.2323
$P'_{g,F'}$	0.5379

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	0.0007
$\Delta P_{g,F}$	0.0103
$\Delta P_{C,t}$	0.0059
$\Delta P_{C,s}$	0.0003

Thermal Properties	
Tg (℃)	616
Ts (℃)	650
$T_{10}^{14.5}$ (℃)	540
T_{10}^{13} (℃)	591
$\alpha_{-50/80℃}$ (10^{-7}/K)	81
$\alpha_{100/300℃}$ (10^{-7}/K)	101
λ (W/(m·K))	1.16

Mechanical Properties	
HK (10^7Pa)	555
F_A	143
E (GPa)	90.4
G (GPa)	36.2
μ	0.248
σ_b (MPa)	57.8
B (10^{-12}/Pa)	2.62

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 ($\times 10^{-7}$/K)	
℃	α
-50/-40	72
-40/-30	75
-30/-20	77
-20/-10	78
-10/0	80
0/10	81
10/20	82
20/30	83
30/40	84
40/50	85
50/60	85
60/70	86
70/80	87
80/90	87
90/100	88
100/110	89
110/120	90
120/130	91
130/140	93
140/150	94
150/160	95

Internal Transmittance		
λ (nm)	τ5mm	τ10mm
2400	0.954	0.908
2200	0.968	0.941
2000	0.990	0.980
1800	0.993	0.986
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	0.998	0.996
550	0.998	0.996
500	0.996	0.990
480	0.993	0.984
460	0.990	0.979
440	0.986	0.972
420	0.980	0.955
400	0.940	0.884
390	0.885	0.785
380	0.745	0.554
370	0.431	0.185
360		
350		
340		
330		
320		
310		
300		
290		
280		

Constants of Dispersion Formula	
A_0	2.91816811E+00
A_1	-1.22621813E-02
A_2	3.41878382E-02
A_3	2.36117574E-03
A_4	-1.68240994E-04
A_5	2.26673138E-05

Density	
ρ (g/cm^3)	3.05

Solarization	
△λ (%)	0.4

Range of Temperature (℃)	Temperature Coefficients of Refractive Index dn/dt relative ($\times 10^{-6}$ / ℃)									
	t	s	C	C'	He-Ne	d	e	F	F'	g
-60 ~ -40	0.8	1.4	1.8	1.8	1.8	2.1	2.6	3.6	3.6	4.7
-40 ~ -20	0.8	1.4	1.8	1.8	1.9	2.1	2.7	3.7	3.7	5.0
-20 ~ 0	0.9	1.5	1.9	1.9	1.9	2.3	2.7	3.8	3.8	5.2
0 ~ 20	0.9	1.5	1.9	1.9	1.9	2.4	2.8	4.0	4.0	5.4
20 ~ 40	0.8	1.6	1.9	2.0	2.1	2.6	3.1	4.3	4.3	5.8
40 ~ 60	1.0	1.7	2.0	2.1	2.2	2.6	3.1	4.6	4.6	6.0
60 ~ 80	1.2	1.9	2.3	2.3	2.4	2.9	3.2	4.8	4.8	6.3
80 ~ 100	1.4	2.0	2.4	2.5	2.7	3.0	3.4	4.9	4.9	6.6
100 ~ 120	1.4	2.1	2.6	2.7	2.7	3.1	3.6	5.1	5.1	6.8
120 ~ 140	1.5	2.2	2.9	3.0	3.1	3.5	3.8	5.4	5.4	7.1
140 ~ 160	1.7	2.4	3.0	3.0	3.1	3.6	4.0	5.6	5.6	7.3

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	410/365
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	389/364

Constants of dn/dt		
D_0	D_1	D_2
-1.87E-06	1.30E-08	-1.69E-11
E_0	E_1	λ_{TK}
8.65E-07	7.76E-10	2.93E-01