H-ZF5 740283

$n_d = 1.74000$	$\upsilon_d = 28.30$	$n_F - n_C = 0.026152$
$n_e = 1.74617$	$\upsilon_e = 28.07$	$n_{F'} - n_{C'} = 0.026584$

Refractive Indices		
	λ (nm)	n_λ
n_{2325}	2325.42	1.69091
n_{1970}	1970.09	1.69701
n_{1530}	1529.58	1.70416
n_{1129}	1128.64	1.71169
n_{1064}	1064.00	1.71325
n_t	1013.98	1.71459
n_s	852.11	1.72020
$n_{A'}$	768.19	1.72435
n_r	706.52	1.72833
n_C	656.27	1.73245
$n_{C'}$	643.85	1.73363
n_{He-Ne}	632.80	1.73474
n_D	589.29	1.73977
n_d	587.56	1.74000
n_e	546.07	1.74617
n_F	486.13	1.75861
$n_{F'}$	479.99	1.76021
n_g	435.84	1.77450
n_h	404.66	1.78876
n_i	365.01	1.81588

Relative Partial Dispersion	
$P_{d,C}$	0.2887
$P_{e,d}$	0.2359
$P_{g,F}$	0.6076
$P'_{d,c'}$	0.2396
$P'_{e,d}$	0.2321
$P'_{g,F'}$	0.5375

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	0.0011
$\Delta P_{g,F}$	0.0110
$\Delta P_{C,t}$	0.0057
$\Delta P_{C,s}$	0.0001

Thermal Properties	
Tg (℃)	610
Ts (℃)	640
$T_{10}^{14.5}$ (℃)	543
T_{10}^{13} (℃)	574
$\alpha_{-50/80℃}$ (10^{-7}/K)	86
$\alpha_{100/300℃}$ (10^{-7}/K)	107
λ (W/(m·K))	1.15

Mechanical Properties	
HK (10^7Pa)	580
F_A	162
E (GPa)	91.2
G (GPa)	35.6
μ	0.283
σ_b (MPa)	61.9
B (10^{-12}/Pa)	2.58

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	76
-40/-30	78
-30/-20	80
-20/-10	82
-10/0	83
0/10	84
10/20	84
20/30	85
30/40	86
40/50	86
50/60	87
60/70	87
70/80	88
80/90	89
90/100	90
100/110	91
110/120	93
120/130	94
130/140	95
140/150	97
150/160	98

Internal Transmittance		
λ (nm)	τ5mm	τ10mm
2400	0.937	0.878
2200	0.962	0.925
2000	0.991	0.982
1800	0.997	0.994
1600	0.997	0.994
1400	0.997	0.994
1200	0.997	0.994
1060	0.997	0.994
1000	0.997	0.994
950	0.997	0.994
900	0.997	0.994
850	0.997	0.994
800	0.997	0.994
750	0.997	0.994
700	0.997	0.994
650	0.997	0.994
600	0.997	0.994
550	0.995	0.992
500	0.992	0.987
480	0.990	0.985
460	0.984	0.973
440	0.980	0.966
420	0.971	0.949
400	0.935	0.875
390	0.892	0.800
380	0.776	0.603
370	0.491	0.236
360	0.109	0.013
350		
340		
330		
320		
310		
300		
290		
280		

Constants of Dispersion Formula	
A_0	2.91687382E+00
A_1	-1.18527790E-02
A_2	3.42689145E-02
A_3	2.02963652E-03
A_4	-1.14580838E-04
A_5	1.85928308E-05

Density	
ρ (g/cm^3)	3.09

Solarization	
△λ (%)	0.0

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	-0.5	-0.3	-0.3	-0.2	0.1	1.0	1.7	1.8	3.2
-40 ~ -20	-0.6	-0.3	-0.2	-0.2	-0.1	0.2	1.2	1.8	2.0	3.4
-20 ~ 0	-0.2	0.0	0.1	0.1	0.1	0.6	1.4	2.2	2.3	3.7
0 ~ 20	0.0	0.2	0.3	0.3	0.3	0.8	1.9	2.5	2.6	3.9
20 ~ 40	0.0	0.3	0.6	0.7	0.8	1.1	1.9	2.6	2.7	4.4
40 ~ 60	0.2	0.5	0.9	1.0	1.1	1.4	2.1	2.9	3.0	4.7
60 ~ 80	0.3	0.8	1.3	1.4	1.5	1.8	2.5	3.3	3.4	5.2
80 ~ 100	0.4	1.0	1.6	1.7	1.9	2.1	2.8	3.8	3.9	5.7
100 ~ 120	0.5	1.2	1.9	2.1	2.2	2.2	3.1	4.2	4.3	6.1
120 ~ 140	0.8	1.4	2.2	2.4	2.5	2.6	3.3	4.4	4.5	6.4
140 ~ 160	1.0	1.5	2.3	2.5	2.6	2.8	3.5	4.7	4.8	6.7

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	415/365
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	389/362

Constants of dn/dt		
D_0	D_1	D_2
-4.00E-06	1.95E-08	-2.24E-11
E_0	E_1	λ_{TK}
7.71E-07	5.88E-10	3.10E-01