D-ZLaF52N 810410

$n_d = 1.81000$	$\upsilon_d = 41.00$	$n_F - n_C = 0.019758$
$n_e = 1.81469$	$\upsilon_e = 40.80$	$n_{F'} - n_{C'} = 0.019970$

Refractive Indices

	λ (nm)	n_λ
n_{2325}	2325.42	1.76475
n_{1970}	1970.09	1.77159
n_{1530}	1529.58	1.77930
n_{1129}	1128.64	1.78671
n_{1064}	1064.00	1.78814
n_t	1013.98	1.78935
n_s	852.11	1.79418
$n_{A'}$	768.19	1.79762
n_r	706.52	1.80084
n_C	656.27	1.80411
$n_{C'}$	643.85	1.80505
$n_{He\text{-}Ne}$	632.80	1.80591
n_D	589.29	1.80982
n_d	587.56	1.81000
n_e	546.07	1.81469
n_F	486.13	1.82387
$n_{F'}$	479.99	1.82502
n_g	435.84	1.83508
n_h	404.66	1.84465
n_i	365.01	1.86160

Relative Partial Dispersion

$P_{d,C}$	0.2981
$P_{e,d}$	0.2374
$P_{g,F}$	0.5674
$P'_{d,c'}$	0.2479
$P'_{e,d}$	0.2349
$P'_{g,F'}$	0.5038

Deviation of Relative Partial Dispersions

$\triangle P_{F,e}$	-0.0029
$\triangle P_{g,F}$	-0.0081
$\triangle P_{C,t}$	0.0083
$\triangle P_{C,s}$	0.0038

Thermal Properties

Tg (℃)	548
Ts (℃)	578
$T_{10}^{14.5}$ (℃)	510
T_{10}^{13} (℃)	529
$\alpha_{-50/80℃}$ (10^{-7}/K)	60
$\alpha_{100/300℃}$ (10^{-7}/K)	79
λ (W/(m K))	0.98
β_d	140

Chemical Properties (grade)

RC (S)	1
RA (S)	3
D_W	1
D_A	3
R_{OH} (S)	1
RP (S)	2
CR	1

Expansion Coefficient α ($\times 10^{-7}$/K)

℃	α
-50/-40	51
-40/-30	54
-30/-20	56
-20/-10	58
-10/0	59
0/10	60
10/20	61
20/30	62
30/40	63
40/50	64
50/60	64
60/70	64
70/80	65
80/90	66
90/100	67
100/110	68
110/120	69
120/130	70
130/140	71
140/150	72
150/160	73

Mechanical Properties

HK (10^7Pa)	625
F_A	91
E (GPa)	114.4
G (GPa)	42.6
μ	0.343
σ_b (MPa)	81
B (10^{-12}/Pa)	2.17

Internal Transmittance

λ (nm)	τ5mm	τ10mm
2400	0.850	0.723
2200	0.956	0.914
2000	0.975	0.951
1800	0.988	0.976
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	0.997
550	0.999	0.997
500	0.998	0.996
480	0.996	0.996
460	0.994	0.993
440	0.992	0.988
420	0.990	0.974
400	0.982	0.959
390	0.975	0.944
380	0.963	0.919
370	0.940	0.876
360	0.894	0.795
350	0.816	0.662
340	0.646	0.415
330	0.320	0.103
320		
310		
300		
290		
280		

Constants of Dispersion Formula

A_0	3.18681101E+00
A_1	-1.44191920E-02
A_2	2.95460135E-02
A_3	1.15252022E-03
A_4	-5.90862778E-05
A_5	5.97442323E-06

Density

ρ (g/cm^3)	4.47

Solarization

$\triangle\lambda$ (%)	-0.6

Temperature Coefficients of Refractive Index
dn/dt relative ($\times 10^{-6}$ / ℃)

Range of Temperature (℃)	t	s	C	C'	He-Ne	d	e	F	F'	g
-60 ~ -40	5.1	5.6	6.7	6.9	7.0	7.2	7.9	9.7	9.8	11.2
-40 ~ -20	5.6	6.2	7.1	7.2	7.3	7.6	8.3	10.1	10.1	11.6
-20 ~ 0	6.0	6.7	7.4	7.6	7.8	8.0	8.6	10.4	10.6	12.0
0 ~ 20	6.5	7.2	7.6	7.9	8.2	8.3	8.8	10.6	10.8	12.3
20 ~ 40	6.7	7.5	7.8	8.1	8.2	8.6	8.9	10.8	11.0	12.5
40 ~ 60	7.0	7.8	8.0	8.2	8.4	8.8	9.0	11.0	11.2	12.7
60 ~ 80	7.2	8.0	8.2	8.3	8.4	9.0	9.2	11.2	11.4	12.9
80 ~ 100	7.4	8.2	8.4	8.4	8.6	9.2	9.4	11.4	11.5	12.9
100 ~ 120	7.7	8.3	8.5	8.5	8.7	9.3	9.6	11.5	11.6	13.0
120 ~ 140	8.0	8.4	8.6	8.6	8.9	9.3	9.7	11.6	11.7	13.1
140 ~ 160	8.3	8.6	8.6	8.6	9.2	9.4	9.8	11.7	11.9	13.2

Coloration Code

$\lambda_{80}(\lambda_{70})/\lambda_5$	395/330

Coloration of Internal Transmittance

$\lambda\tau_{80}/\lambda\tau_5$	360/327

Constants of dn/dt

D_0	D_1	D_2
6.96E-06	2.21E-08	-4.66E-11
E_0	E_1	λ_{TK}
9.87E-07	-3.77E-10	2.98E-01

NHG