

# D-ZLaF52L      806407

$n_d = 1.80610$	$v_d = 40.73$	$n_F - n_C = 0.019791$
$n_e = 1.81080$	$v_e = 40.48$	$n_{F'} - n_{C'} = 0.020031$

Refractive Indices		
	λ (nm)	n <sub>λ</sub>
n <sub>2325</sub>	2325.42	1.76065
n <sub>1970</sub>	1970.09	1.76756
n <sub>1530</sub>	1529.58	1.77534
n <sub>1129</sub>	1128.64	1.78278
n <sub>1064</sub>	1064.00	1.78422
n <sub>t</sub>	1013.98	1.78543
n <sub>s</sub>	852.11	1.79027
n <sub>A'</sub>	768.19	1.79371
n <sub>r</sub>	706.52	1.79694
n <sub>C</sub>	656.27	1.80022
n <sub>C'</sub>	643.85	1.80114
n <sub>He-Ne</sub>	632.80	1.80201
n <sub>D</sub>	589.29	1.80592
n <sub>d</sub>	587.56	1.80610
n <sub>e</sub>	546.07	1.81080
n <sub>F</sub>	486.13	1.82002
n <sub>F'</sub>	479.99	1.82117
n <sub>g</sub>	435.84	1.83126
n <sub>h</sub>	404.66	1.84085
n <sub>i</sub>	365.01	1.85784

Relative Partial Dispersion	
P <sub>d,C</sub>	0.2971
P <sub>e,d</sub>	0.2375
P <sub>g,F</sub>	0.5679
P' <sub>d,c'</sub>	0.2476
P' <sub>e,d</sub>	0.2346
P' <sub>g,F'</sub>	0.5037

Chemical Properties (grade)	
RC (S)	1
RA (S)	3
D <sub>W</sub>	1
D <sub>A</sub>	3
R <sub>OH</sub> (S)	1
RP (S)	3

Internal Transmittance		
λ (nm)	τ <sub>5mm</sub>	τ <sub>10mm</sub>
2400	0.848	0.719
2200	0.962	0.925
2000	0.995	0.990
1800	0.999	0.998
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	0.998	0.995
480	0.996	0.992
460	0.994	0.988
440	0.992	0.983
420	0.988	0.976
400	0.982	0.963
390	0.975	0.949
380	0.963	0.928
370	0.942	0.888
360	0.902	0.818
350	0.822	0.683
340	0.658	0.433
330	0.342	0.118
320		
310		
300		
290		
280		

Deviation of Relative Partial Dispersions	
ΔP <sub>F,e</sub>	-0.0018
ΔP <sub>g,F</sub>	-0.0080
ΔP <sub>C,t</sub>	0.0098
ΔP <sub>C,s</sub>	0.0046

Expansion Coefficient α (×10 <sup>-7</sup> /K)	
°C	α
-50/-40	52
-40/-30	55
-30/-20	56
-20/-10	57
-10/0	58
0/10	59
10/20	59
20/30	60
30/40	61
40/50	61
50/60	62
60/70	63
70/80	64
80/90	66
90/100	67
100/110	68
110/120	68
120/130	69
130/140	71
140/150	72
150/160	72

Thermal Properties	
T <sub>g</sub> (°C)	546
T <sub>s</sub> (°C)	580
T <sub>10</sub> <sup>14.5</sup> (°C)	519
T <sub>10</sub> <sup>13</sup> (°C)	538
α <sub>50/80°C</sub> (10 <sup>-7</sup> /K)	59
α <sub>100/300°C</sub> (10 <sup>-7</sup> /K)	75
λ (W/(m·K))	0.87
β <sub>d</sub>	140

Mechanical Properties	
HK (10 <sup>7</sup> Pa)	645
F <sub>A</sub>	106
E (GPa)	112.8
G (GPa)	42.0
μ	0.342
σ <sub>b</sub> (MPa)	73.1
B (10 <sup>-12</sup> /Pa)	2.23

Constants of Dispersion Formula	
A <sub>0</sub>	3.17316178E+00
A <sub>1</sub>	-1.45588429E-02
A <sub>2</sub>	2.92758988E-02
A <sub>3</sub>	1.20865059E-03
A <sub>4</sub>	-6.18358136E-05
A <sub>5</sub>	5.88185791E-06

Density	Solarization
ρ (g/cm <sup>3</sup> )    4.43	Δλ (%)    0.0

Range of Temperature (°C)	Temperature Coefficients of Refractive Index									
	dn/dt relative (×10 <sup>-6</sup> / °C)									
	t	s	C	C'	He-Ne	d	e	F	F'	g
-60 ~ -40	5.4	6.3	6.5	6.6	6.7	7.3	7.6	8.0	8.2	9.6
-40 ~ -20	5.6	6.3	6.6	6.7	6.9	7.4	7.8	8.3	8.4	9.8
-20 ~ 0	5.8	6.3	6.8	6.8	6.9	7.5	7.9	8.4	8.5	9.9
0 ~ 20	6.0	6.4	6.8	6.9	6.9	7.5	8.0	8.5	8.6	9.9
20 ~ 40	6.2	6.5	6.9	6.9	7.0	7.7	8.1	8.5	8.6	9.9
40 ~ 60	6.4	6.6	6.9	7.0	7.1	7.9	8.1	8.7	8.8	10.0
60 ~ 80	6.5	6.7	7.0	7.1	7.3	7.9	8.1	8.6	8.8	10.2
80 ~ 100	6.6	6.8	7.1	7.3	7.4	8.1	8.4	9.0	9.1	10.4
100 ~ 120	6.7	7.0	7.3	7.4	7.5	8.2	8.6	9.0	9.2	10.5
120 ~ 140	6.8	7.1	7.4	7.5	7.7	8.4	8.7	9.1	9.3	10.7
140 ~ 160	6.9	7.1	7.6	7.7	7.9	8.5	8.8	9.3	9.5	10.9

Coloration Code	
λ <sub>80</sub> (λ <sub>70</sub> )/λ <sub>5</sub>	395/330
Coloration of Internal Transmittance	
λτ <sub>80</sub> /λτ <sub>5</sub>	357/327

Constants of dn/dt		
D <sub>0</sub>	D <sub>1</sub>	D <sub>2</sub>
6.51E-06	1.42E-08	-2.06E-11
E <sub>0</sub>	E <sub>1</sub>	λ <sub>TK</sub>
6.70E-07	3.07E-11	2.84E-01