

D-ZLaF52N-M170 808409

$n_d = 1.80834$	$v_d = 40.92$	$n_F - n_C = 0.019753$
$n_e = 1.81303$	$v_e = 40.67$	$n_{F'} - n_{C'} = 0.019992$

Refractive Indices		
	λ (nm)	n_λ
n_{2325}	2325.42	1.76315
n_{1970}	1970.09	1.77000
n_{1530}	1529.58	1.77771
n_{1129}	1128.64	1.78511
n_{1064}	1064.00	1.78654
n_t	1013.98	1.78774
n_s	852.11	1.79256
$n_{A'}$	768.19	1.79599
n_r	706.52	1.79921
n_C	656.27	1.80247
$n_{C'}$	643.85	1.80340
n_{He-Ne}	632.80	1.80427
n_D	589.29	1.80817
n_d	587.56	1.80834
n_e	546.07	1.81303
n_F	486.13	1.82223
$n_{F'}$	479.99	1.82339
n_g	435.84	1.83343
n_h	404.66	1.84298
n_i	365.01	1.85982

Relative Partial Dispersion	
$P_{d,C}$	0.2972
$P_{e,d}$	0.2374
$P_{g,F}$	0.5670
$P'_{d,c'}$	0.2471
$P'_{e,d}$	0.2346
$P'_{g,F'}$	0.5022

Chemical Properties (grade)	
RC (S)	1
RA (S)	3
D_W	1
D_A	3
R_{OH} (S)	1
RP (S)	2

Internal Transmittance		
λ (nm)	τ_{5mm}	τ_{10mm}
2400	0.855	0.731
2200	0.968	0.937
2000	0.990	0.980
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	0.996
480	0.996	0.993
460	0.994	0.990
440	0.992	0.986
420	0.990	0.980
400	0.982	0.967
390	0.976	0.955
380	0.963	0.934
370	0.942	0.898
360	0.911	0.831
350	0.834	0.701
340	0.671	0.454
330	0.372	0.136
320		
310		
300		
290		
280		

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	-0.0019
$\Delta P_{g,F}$	-0.0086
$\Delta P_{C,t}$	0.0073
$\Delta P_{C,s}$	0.0031

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

Thermal Properties	
T_g ($^{\circ}C$)	548
T_s ($^{\circ}C$)	578
$T_{10}^{14.5}$ ($^{\circ}C$)	510
T_{10}^{13} ($^{\circ}C$)	529
$\alpha_{50/80^{\circ}C}$ ($10^{-7}/K$)	60
$\alpha_{100/300^{\circ}C}$ ($10^{-7}/K$)	79
λ (W/(m·K))	1.00
β_d	140

Mechanical Properties	
HK (10^7 Pa)	625
F_A	91
E (GPa)	115.4
G (GPa)	42.9
μ	0.344
σ_b (MPa)	71.0
B (10^{-12} /Pa)	2.17

Constants of Dispersion Formula	
A_0	3.18131839E+00
A_1	-1.44359617E-02
A_2	2.92512247E-02
A_3	1.19876602E-03
A_4	-5.70803235E-05
A_5	5.23040290E-06

Density		Solarization	
ρ (g/cm ³)	4.47	$\Delta\lambda$ (%)	-0.6

Range of Temperature ($^{\circ}C$)	Temperature Coefficients of Refractive Index									
	dn/dt relative ($\times 10^{-6} / ^{\circ}C$)									
	t	s	C	C'	He-Ne	d	e	F	F'	g
-60 ~ -40	5.9	6.9	6.7	6.9	7.0	7.2	7.9	9.7	9.8	10.3
-40 ~ -20	5.9	7.0	7.1	7.2	7.3	7.6	8.3	10.1	10.1	10.5
-20 ~ 0	5.9	7.2	7.4	7.6	7.8	8.0	8.6	10.4	10.6	10.8
0 ~ 20	6.0	7.2	7.6	7.9	8.2	8.3	8.8	10.6	10.8	11.1
20 ~ 40	6.0	7.3	7.8	8.1	8.2	8.6	8.9	10.8	11.0	11.2
40 ~ 60	6.2	7.5	8.0	8.2	8.4	8.8	9.0	11.0	11.2	11.4
60 ~ 80	6.3	7.6	8.2	8.3	8.4	9.0	9.2	11.2	11.4	11.7
80 ~ 100	6.5	7.8	8.4	8.4	8.6	9.2	9.4	11.4	11.5	12.0
100 ~ 120	6.5	7.9	8.5	8.5	8.7	9.3	9.6	11.5	11.6	12.3
120 ~ 140	6.7	8.1	8.6	8.6	8.9	9.3	9.7	11.6	11.7	12.6
140 ~ 160	6.7	8.2	8.6	8.6	9.2	9.4	9.8	11.7	11.9	12.9

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	390/330
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	357/327

Constants of dn/dt		
D_0	D_1	D_2
6.23E-06	1.24E-08	-1.88E-11
E_0	E_1	λ_{TK}
1.67E-06	1.27E-09	4.39E-07