

H-ZLaF70GT 904313

$n_d = 1.90366$	$v_d = 31.32$	$n_F - n_C = 0.028857$
$n_e = 1.91048$	$v_e = 31.08$	$n_{F'} - n_{C'} = 0.029295$

Refractive Indices		
	λ (nm)	n_λ
n_{2325}	2325.42	1.84663
n_{1970}	1970.09	1.85408
n_{1530}	1529.58	1.86274
n_{1129}	1128.64	1.87166
n_{1064}	1064.00	1.87348
n_t	1013.98	1.87504
n_s	852.11	1.88144
$n_{A'}$	768.19	1.88615
n_r	706.52	1.89065
n_C	656.27	1.89526
$n_{C'}$	643.85	1.89657
n_{He-Ne}	632.80	1.89781
n_D	589.29	1.90341
n_d	587.56	1.90366
n_e	546.07	1.91048
n_F	486.13	1.92412
$n_{F'}$	479.99	1.92587
n_g	435.84	1.94128
n_h	404.66	1.95645
n_i	365.01	1.98472

Relative Partial Dispersion	
$P_{d,C}$	0.2911
$P_{e,d}$	0.2363
$P_{g,F}$	0.5947
$P'_{d,c'}$	0.2420
$P'_{e,d}$	0.2328
$P'_{g,F'}$	0.5260

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

Internal Transmittance		
λ (nm)	τ_{5mm}	τ_{10mm}
2400	0.867	0.751
2200	0.947	0.897
2000	0.982	0.964
1800	0.992	0.984
1600	0.997	0.995
1400	0.998	0.996
1200	0.999	0.997
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	0.998	0.997
550	0.997	0.995
500	0.994	0.988
480	0.991	0.983
460	0.987	0.975
440	0.982	0.964
420	0.971	0.942
400	0.941	0.886
390	0.904	0.817
380	0.817	0.668
370	0.611	0.348
360	0.268	0.053
350		
340		
330		
320		
310		
300		
290		
280		

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	-0.0002
$\Delta P_{g,F}$	0.0031
$\Delta P_{C,t}$	0.0088
$\Delta P_{C,s}$	0.0033

Expansion Coefficient α ($\times 10^{-7}/K$)	
$^{\circ}C$	α
-50/-40	59
-40/-30	61
-30/-20	62
-20/-10	64
-10/0	65
0/10	66
10/20	66
20/30	67
30/40	68
40/50	68
50/60	69
60/70	70
70/80	70
80/90	71
90/100	71
100/110	73
110/120	74
120/130	75
130/140	76
140/150	77
150/160	77

Thermal Properties	
T_g ($^{\circ}C$)	679
T_s ($^{\circ}C$)	707
$T_{10}^{14.5}$ ($^{\circ}C$)	595
T_{10}^{13} ($^{\circ}C$)	643
$\alpha_{50/80^{\circ}C}$ ($10^{-7}/K$)	66
$\alpha_{100/300^{\circ}C}$ ($10^{-7}/K$)	82
λ (W/(m·K))	1.04

Constants of Dispersion Formula	
A_0	3.48854243E+00
A_1	-1.59982726E-02
A_2	4.28443509E-02
A_3	2.18903241E-03
A_4	-1.15672643E-04
A_5	1.78697063E-05

Mechanical Properties	
HK ($10^7 Pa$)	640
F_A	80
E (GPa)	117.6
G (GPa)	45.6
μ	0.288
σ_b (MPa)	63.1
B ($10^{-12}/Pa$)	2.01

Density		Solarization	
ρ (g/cm^3)	4.54	$\Delta\lambda$ (%)	-0.4

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	2.4	2.8	3.3	3.4	3.4	3.6	4.0	5.1	5.1	6.4
-40 ~ -20	2.4	2.9	3.4	3.4	3.5	3.8	4.3	5.2	5.3	6.5
-20 ~ 0	2.4	3.1	3.5	3.5	3.6	4.0	4.5	5.4	5.5	6.8
0 ~ 20	2.5	3.3	3.6	3.6	3.7	4.1	4.6	5.6	5.7	7.1
20 ~ 40	2.6	3.4	3.7	3.7	3.8	4.2	4.7	5.9	6.0	7.5
40 ~ 60	2.7	3.4	3.8	3.9	3.9	4.3	4.9	6.2	6.2	7.7
60 ~ 80	2.7	3.5	4.0	4.0	4.1	4.6	5.1	6.5	6.5	8.0
80 ~ 100	2.9	3.5	4.1	4.1	4.2	4.8	5.2	6.8	6.8	8.2
100 ~ 120	3.1	3.7	4.2	4.2	4.4	4.9	5.2	7.0	7.0	8.3
120 ~ 140	3.3	3.9	4.3	4.4	4.6	5.1	5.4	7.1	7.2	8.4
140 ~ 160	3.5	4.0	4.4	4.4	4.6	5.3	5.6	7.2	7.3	8.6

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	(395)/361
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	389/360

Constants of dn/dt		
D_0	D_1	D_2
6.13E-07	1.29E-08	-2.38E-11
E_0	E_1	λ_{TK}
7.62E-07	6.31E-10	2.84E-01