H-LaK51 697555

n_d = 1.69680	υ_d = 55.46	$n_F - n_C$ = 0.012564
n_e = 1.69980	υ_e = 55.25	$n_{F'} - n_{C'}$ = 0.012667

Refractive Indices

	λ (nm)	n_λ
n_{2325}	2325.42	1.65840
n_{1970}	1970.09	1.66575
n_{1530}	1529.58	1.67368
n_{1129}	1128.64	1.68042
n_{1064}	1064.00	1.68159
n_t	1013.98	1.68254
n_s	852.11	1.68616
$n_{A'}$	768.19	1.68859
n_r	706.52	1.69079
n_C	656.27	1.69297
$n_{C'}$	643.85	1.69358
n_{He-Ne}	632.80	1.69415
n_D	589.29	1.69669
n_d	587.56	1.69680
n_e	546.07	1.69980
n_F	486.13	1.70553
$n_{F'}$	479.99	1.70625
n_g	435.84	1.71234
n_h	404.66	1.71800
n_i	365.01	1.72765

Relative Partial Dispersion

$P_{d,C}$	0.3048
$P_{e,d}$	0.2388
$P_{g,F}$	0.5420
$P'_{d,c'}$	0.2542
$P'_{e,d}$	0.2368
$P'_{g,F'}$	0.4808

Deviation of Relative Partial Dispersions

$\triangle P_{F,e}$	-0.0035
$\triangle P_{g,F}$	-0.0095
$\triangle P_{C,t}$	0.0213
$\triangle P_{C,s}$	0.0085

Thermal Properties

Tg (℃)	650
Ts (℃)	676
$T_{10}^{14.5}$ (℃)	591
T_{10}^{13} (℃)	625
$\alpha_{-50/80℃}$ (10^{-7}/K)	55
$\alpha_{100/300℃}$ (10^{-7}/K)	71
λ (W/(m K))	0.62

Mechanical Properties

HK (10^7Pa)	680
F_A	85
E (GPa)	110.2
G (GPa)	43.9
μ	0.255
σ_b (MPa)	64
B (10^{-12}/Pa)	1.70

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 (×10^{-7}/K)

℃	α
-50/-40	52
-40/-30	53
-30/-20	54
-20/-10	55
-10/0	56
0/10	56
10/20	57
20/30	57
30/40	58
40/50	58
50/60	58
60/70	59
70/80	59
80/90	59
90/100	60
100/110	61
110/120	61
120/130	62
130/140	63
140/150	64
150/160	65

Internal Transmittance

λ (nm)	τ5mm	τ10mm
2400	0.757	0.575
2200	0.923	0.846
2000	0.986	0.960
1800	0.999	0.993
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	0.999	0.998
480	0.999	0.998
460	0.999	0.998
440	0.999	0.998
420	0.997	0.993
400	0.992	0.987
390	0.990	0.980
380	0.985	0.971
370	0.975	0.951
360	0.957	0.918
350	0.928	0.862
340	0.885	0.787
330	0.827	0.683
320	0.748	0.561
310	0.643	0.417
300	0.553	0.308
290	0.451	0.206
280	0.328	0.110

Constants of Dispersion Formula

A_0	2.82930828E+00
A_1	-1.51991877E-02
A_2	1.69710302E-02
A_3	9.14047795E-04
A_4	-8.69746514E-05
A_5	4.85293775E-06

Density

ρ (g/cm^3)	3.69

Solarization

$\triangle\lambda$ (%)	-3.7

Coloration Code

$\lambda_{80}(\lambda_{70})/\lambda_5$	360/280

Coloration of Internal Transmittance

$\lambda\tau_{80}/\lambda\tau_5$	342/277

Temperature Coefficients of Refractive Index — dn/dt relative (×10^{-6} / ℃)

Range of Temperature (℃)	t	s	C	C'	He-Ne	d	e	F	F'	g
-60 ~ -40	3.9	4.1	4.2	4.3	4.4	4.5	4.7	5.0	5.0	5.4
-40 ~ -20	3.9	4.2	4.3	4.3	4.4	4.5	4.7	5.1	5.1	5.4
-20 ~ 0	3.9	4.2	4.3	4.3	4.4	4.5	4.7	5.1	5.2	5.4
0 ~ 20	3.9	4.2	4.3	4.3	4.4	4.5	4.7	5.1	5.2	5.4
20 ~ 40	3.9	4.2	4.4	4.4	4.5	4.5	4.7	5.2	5.3	5.5
40 ~ 60	4.1	4.4	4.5	4.6	4.7	4.7	4.9	5.4	5.4	5.8
60 ~ 80	4.1	4.4	4.6	4.7	4.6	4.9	5.0	5.5	5.5	5.9
80 ~ 100	4.2	4.4	4.7	4.8	4.8	5.0	5.0	5.5	5.5	6.0
100 ~ 120	4.2	4.5	4.7	4.8	4.8	5.0	5.1	5.5	5.6	6.0
120 ~ 140	4.2	4.5	4.8	4.8	4.8	5.1	5.1	5.5	5.6	6.1
140 ~ 160	4.3	4.4	4.8	4.9	4.9	5.1	5.1	5.6	5.6	6.1

Constants of dn/dt

D_0	D_1	D_2
4.02E-06	1.29E-08	-2.62E-11
E_0	E_1	λ_{TK}
4.49E-07	2.06E-10	2.05E-01

NHG