



Optical Glass Data Sheet

成都赛林斯科技实业有限公司
SALIENCE SCIENCE & TECHNOLOGY INDUSTRIAL CO.,LTD.

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牌号对照表

序号	SALIENCE	CODE	CDGM	HOYA	SCHOTT	OHARA	HIKARI	NHG
1	H-LaF1S	694492	H-LaF1			(S-LAL58)		H-LaF1
2	H-LaF2S	717479	H-LaF2	LAF3	N-LAF3	S-LAM3	J-LAF3	H-LaF2
3	H-LaF3B	744449	H-LaF3B	LAF2	N-LAF2	S-LAM2	J-LAF2	H-LaF3B
4	H-LaF4S	750350	H-LaF4	E-LAF7	N-LAF7	S-LAM7	J-LAF7	H-LaF4
5	H-LaF5S	754375	H-LaF5					
6	H-LaF6S	757477	H-LaF6LA	NBF2	LAFN24	S-LAM54	J-LAF04	H-LaF6LB
7	H-LaF10S	788475	H-LaF10LA	TAF4	N-LAF21	S-LAH64	J-LASF014	H-LaF10A
8	H-LaF50S	773496	H-LaF50B	TAF1	N-LAF34	S-LAH66	J-LASF016	H-LaF50
9	H-LaF51S	700481	H-LaF51			S-LAM51	J-LAF01	H-LaF51
10	H-LaF52S	786442	H-LaF52	NBFD11	N-LAF33	S-LAH51	J-LASF01	H-LaF52
11	H-LaF53S	743492	H-LaF53	NBF1	N-LAF35	S-LAM60	J-LAF010	H-LaF53
12	H-LaF54S	800422	H-LaF54	NBFD12	N-LAF36	S-LAH52	J-LASF02	H-LaF54
13	H-LaF54A	800422	H-LaF54	NBFD12	N-LAF36	S-LAH52	J-LASF02	H-LaF54
14	H-LaF55S	762401	H-LaF55			S-LAM55	J-LAF05	H-LaF76
15	H-LaF62S	720437	H-LaF62			S-LAM52	J-LAF02	H-LaF62
16	H-LaK1S	660574	H-LaK1	LAC11	LAK11			H-LaK1
17	H-LaK2S	692545	H-LaK2A					H-LaK2H
18	H-LaK3S	747510	H-LaK3					H-LaK3
19	H-LaK4S	640602	H-LaK4L	LACL60	N-LAK21	S-BSM81	J-LAK01	H-LaK4L
20	H-LaK5S	678555	H-LaK5A	LAC12	N-LAK12	S-LAL12	J-LAK12	H-LaK5A
21	H-LaK6S	694534	H-LaK6A	LAC13	N-LAK13	S-LAL13	J-LAK13	H-LaK6
22	H-LaK7B	713539	H-LaK7A	LAC8	N-LAK8	S-LAL8	J-LAK8	H-LaK7
23	H-LaK8S	720503	H-LaK8A	LAC10	N-LAK10	S-LAL10	J-LAK10	H-LaK8A
24	H-LaK10S	651559	H-LaK10	LACL12	N-LAK22	S-LAL54	J-LAK04	H-LaK10
25	H-LaK11S	665546	H-LaK11					
26	H-LaK12S	697562	H-LaK12		LAK24	LAL64		H-LaK12
27	H-LaK50S	652584	H-LaK50A	LAC7	N-LAK7	S-LAL7	J-LAK7	H-LaK50A
28	H-LaK51S	697555	H-LaK51A	LAC14	N-LAK14	S-LAL14	J-LAK14	H-LaK51
29	H-LaK52S	729547	H-LaK52	TAC8	N-LAK34	S-LAL18	J-LAK18	H-LaK52
30	H-LaK53S	755523	H-LaK53B	TAC6	N-LAK33B	S-YGH51	J-LASKH2	H-LaK53B
31	H-LaK54S	734515	H-LaK54	TAC4		S-LAL59	J-LAK09	H-LaK54
32	H-LaK59S	691548	H-LaK59A	LAC9	N-LAK9	S-LAL9	J-LAK9	H-LaK2
33	H-LaK61S	741526	H-LaK61	TAC2		S-LAL61	J-LAK011	H-LaK61
34	H-ZLaF3S	855366	H-ZLaF3	TAFD13	LASF13			H-ZLaF3
35	H-ZLaF4LS	911353	H-ZLaF4LA	TAFD35				H-ZLaF72
36	H-ZLaF50S	804466	H-ZLaF50E	TAF3D	N-LASF44	S-LAH65V	J-LASF015	H-ZLaF50
37	H-ZLaF51S	805396	H-ZLaF51	NBFD3		(S-LAH63)	J-LASF013	H-ZLaF51
38	H-ZLaF52S	806410	H-ZLaF52	NBFD13	N-LASF43	S-LAH53		H-ZLaF52
39	H-ZLaF53A	834372	H-ZLaF53B	NBFD10	N-LASF40	S-LAH60	J-LASF010	H-ZLaF53
40	H-ZLaF53B	834372	H-ZLaF53B	NBFD10	N-LASF40	S-LAH60	J-LASF010	H-ZLaF53
41	H-ZLaF55D	835427	H-ZLaF55D	TAFD5G	N-LASF41	S-LAH55V	J-LASF05	H-ZLaF55F
42	H-ZLaF56S	806333	H-ZLaF56B	NBFD15			J-LASFH6	H-ZLaF56
43	H-ZLaF66S	801350	H-ZLaF66		N-LASF45	S-LAM66	J-LAF016	H-ZLaF66A
44	H-ZLaF68A	883409	H-ZLaF68C	TAFD30	N-LASF31A	S-LAH58	J-LASF08A	H-ZLaF68A
45	H-ZLaF68N	883392	H-ZLaF68N					H-ZLaF68L

46	H-ZLaF69A	816466	H-ZLaF69	TAF5		S-LAH59	J-LASF09A	H-ZLaF54
47	H-ZLaF71S	850323	H-ZLaF71			S-LAH71	J-LASF021	H-ZLaF60
48	H-ZLaF75S	904313	H-ZLaF75A	TAFD25	N-LASF46A	S-LAH95	J-LASFH13	H-ZLaF70
49	H-ZLaF76S	850301	H-ZLaF76			S-NBH57		H-ZLaF76
50	H-ZLaF78A	901371	H-ZLaF78B	(TAFD37A)				H-ZLaF78
51	H-ZLaF89S	954323	H-ZLaF89L	TAFD45		S-LAH98	J-LASFH21	H-ZLaF77A
52	H-ZLaF90S	001254	H-ZLaF90	TAFD40			J-LASFH17	H-ZLaF80
53	H-ZLaF92S	003283	H-ZLaF92			S-LAH79		
54	H-ZF7S	805255	H-ZF7LA	FD60	N-SF6	S-TIH6	J-SF6	H-ZF7L
55	H-ZF13S	785257	H-ZF13	FD110	N-SF11	S-TIH11	J-SF11	H-ZF13
56	H-ZF52S	847238	H-ZF52	FDS90	N-SF57	S-TIH53	J-SF03	
57	H-ZF62S	923209	H-ZF62	E-FDS1	N-SF66			H-ZF62
58	H-ZF71S	808227	H-ZF71	FD225		S-NPH1	J-SFH1	
59	H-ZF72S	923189	H-ZF72A			S-NPH2		H-ZF72B
60	H-ZF88S	946179	H-ZF88	FDS18				H-ZF75A
61	H-ZPK1S	618634	H-ZPK1A	PCD4	N-PSK53A	S-PHM52	J-PSK02	H-PK62A
62	H-ZPK2S	603655	H-ZPK2A			S-PHM53	J-PSK03	H-PK63
63	H-QK3LS	487704	H-QK3L	FC5	N-FK5	S-FSL5	J-FK5	H-QK3L
64	D-K9S	516641	D-K9		P-BK7	L-BSL7		D-K9
65	D-ZK2S	583594	D-ZK2	M-BACD12		L-BAL42		
66	D-ZK3S	589612	D-ZK3	M-BACD5N	P-SK58A	L-BAL35		D-ZK3L
67	D-LaK6S	694531	D-LaK6	M-LAC130	P-LAK35	L-LAL13		D-LaK6
68	D-LaF53S	743493	D-LaF53	M-NBF1		L-LAM60		D-LaF743
69	D-ZLaF52S	810410	D-ZLaF52LA		P-LASF51			D-ZLaF52N

H-LaF1S	694492	n _d = 1.69362	v _d = 49.19	n _F -n _C = 0.01410
		n _e = 1.69697	v _e = 48.91	n _F -n _{C'} = 0.01425

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.65823
n _{1970.1}	1970.1	1.66416
n _{1529.6}	1529.6	1.67058
n _{1060.0}	1060.0	1.67763
n _t	1014.0	1.67848
n _s	852.1	1.67848
n _r	706.5	1.68702
n _C	656.3	1.68939
n _{C'}	643.9	1.69006
n _{He-Ne}	632.8	1.69069
n _D	589.3	1.69350
n _d	587.6	1.69362
n _e	546.1	1.69697
n _F	486.1	1.70349
n _{F'}	480.0	1.70431
n _g	435.8	1.71138
n _h	404.7	1.71803
n _i	365.0	1.72961
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	1.16155250E+000
L ₁	1.06692961E+002
K ₂	1.49000619E+000
L ₂	7.36542430E-003
K ₃	3.17836401E-001
L ₃	3.13945298E-002

折射率温度系数常数 Constants of dn/dt	
D ₀	1.00E-06
D ₁	2.31E-08
D ₂	-1.60E-10
E ₀	5.94E-07
E ₁	-4.95E-10
λ _{TK} (μm)	2.15E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	1.5	1.8	1.9	2.4	2.7	3.1
-20~0	1.7	2.3	2.5	3.1	3.5	4.2
0~20	2.4	2.9	3.2	3.3	3.9	4.4
20~40	2.5	3.1	3.4	3.4	4.0	4.5
40~60	2.6	3.1	3.5	3.7	4.1	4.6
60~80	2.5	3.1	3.5	3.6	4.2	4.7
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2578	P' _{s,t}	0.2551
P _{C,s}	0.5160	P' _{C',s}	0.5575
P _{d,C}	0.2998	P' _{d,C'}	0.2497
P _{e,d}	0.2379	P' _{e,d}	0.2354
P _{g,F}	0.5591	P' _{g,F'}	0.4957
P _{ih}	0.8214	P' _{ih}	0.8128

异常色散 Abnormal Dispersions			
ΔP _{C,t}	-0.0042	ΔP _{C,s}	-0.0020
ΔP _{F,e}	-0.0004	ΔP _{g,F}	-0.0028

热性质 Thermal Properties	
T _g (℃)	640
T _g (℃)	676
T ₁₀ ^{14.5} (℃)	595
T ₁₀ ¹³ (℃)	627
T ₁₀ ^{7.6} (℃)	737
α _{-30/70℃} (10 ⁻⁷ /K)	71
α _{100/300℃} (10 ⁻⁷ /K)	85
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	613
F _A	158
E(10 ⁷ Pa)	10138
G(10 ⁷ Pa)	3933
μ	0.289
B(10 ⁻¹² /Pa)	1.82

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.897	0.805
2200	0.971	0.942
2000	0.989	0.979
1800	0.996	0.991
1600	0.997	0.994
1400	0.998	0.997
1200	0.999	0.999
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	0.997	0.994
700	0.997	0.994
650	0.997	0.995
600	0.998	0.997
550	0.998	0.996
500	0.997	0.995
480	0.996	0.992
460	0.994	0.989
440	0.991	0.983
420	0.988	0.976
400	0.978	0.957
390	0.968	0.937
380	0.951	0.904
370	0.914	0.835
360	0.834	0.696
350	0.658	0.433
340	0.330	0.109
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	385/340
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	3.85

退火增值系数 ECFA.	
β	130

备注 Remarks	

H-LaF2S	717479	$n_d=1.71700$	$v_d=47.89$	$n_F-n_C=0.01497$
		$n_e=1.72056$	$v_e=47.60$	$n_F-n_C=0.01514$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.68174
$n_{1970.1}$	1970.1	1.68726
$n_{1529.6}$	1529.6	1.69333
$n_{1060.0}$	1060.0	1.70028
n_t	1014.0	1.70114
n_s	852.1	1.70114
n_r	706.5	1.71002
n_C	656.3	1.71252
$n_{C'}$	643.9	1.71323
$n_{\text{He-Ne}}$	632.8	1.71389
n_D	589.3	1.71687
n_d	587.6	1.71700
n_e	546.1	1.72056
n_F	486.1	1.72749
$n_{F'}$	480.0	1.72837
n_g	435.8	1.73589
n_h	404.7	1.74298
n_i	365.0	1.75532
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
K_1	1.62865121E+000
L_1	8.64219294E-003
K_2	1.11837078E+000
L_2	1.09900598E+002
K_3	2.53252293E-001
L_3	3.42503107E-002

折射率温度系数常数 Constants of dn/dt	
D_0	-4.12E-06
D_1	2.75E-08
D_2	-1.05E-10
E_0	8.05E-07
E_1	-8.24E-10
$\lambda_{\text{TK}}(\mu\text{m})$	1.07E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	-1.0	-0.6	-0.3	-0.1	0.5	0.8
-20~0	-1.0	-0.6	-0.3	0.0	0.5	1.0
0~20	-0.6	0.1	0.6	0.7	1.4	1.8
20~40	-0.2	0.7	1.0	1.2	1.5	2.0
40~60	0.2	0.8	1.0	1.1	1.6	2.2
60~80	0.3	0.9	1.1	1.2	1.7	2.4
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2500	$P'_{s,t}$	0.2473
$P_{C,s}$	0.5103	$P'_{C',s}$	0.5514
$P_{d,C}$	0.2991	$P'_{d,C'}$	0.2491
$P_{e,d}$	0.2379	$P'_{e,d}$	0.2353
$P_{g,F}$	0.5606	$P'_{g,F'}$	0.4969
$P_{i,h}$	0.8244	$P'_{i,h}$	0.8154

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	-0.0116	$\Delta P_{C,s}$	-0.0047
$\Delta P_{F,e}$	-0.0005	$\Delta P_{g,F}$	-0.0035

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	666
$T_S(^{\circ}\text{C})$	704
$T_{10}^{14.5}(^{\circ}\text{C})$	612
$T_{10}^{13}(^{\circ}\text{C})$	650
$T_{10}^{7.6}(^{\circ}\text{C})$	772
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	79
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	91
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	6
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	561
F_A	205
$E(10^7\text{Pa})$	9061
$G(10^7\text{Pa})$	3524
μ	0.286
$B(10^{-12}/\text{Pa})$	1.47

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.892	0.795
2200	0.954	0.909
2000	0.981	0.962
1800	0.991	0.981
1600	0.997	0.993
1400	0.997	0.995
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
700	0.999	0.998
650	0.999	0.998
600	0.999	0.998
550	0.999	0.998
500	0.998	0.997
480	0.997	0.995
460	0.997	0.994
440	0.995	0.991
420	0.993	0.986
400	0.988	0.976
390	0.979	0.958
380	0.963	0.928
370	0.928	0.862
360	0.851	0.725
350	0.688	0.474
340	0.383	0.147
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	380/340
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	4.22

退火增值系数 ECFA.	
β	120

备注 Remarks	

H-LaF3B	744449	n _d = 1.74400	v _d = 44.90	n _F -n _C = 0.01657
		n _e = 1.74794	v _e = 44.62	n _F -n _{C'} = 0.01676

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.70772
n _{1970.1}	1970.1	1.71295
n _{1529.6}	1529.6	1.71881
n _{1060.0}	1060.0	1.72585
n _t	1014.0	1.72676
n _s	852.1	1.72676
n _r	706.5	1.73632
n _C	656.3	1.73907
n _{C'}	643.9	1.73985
n _{He-Ne}	632.8	1.74057
n _D	589.3	1.74385
n _d	587.6	1.74400
n _e	546.1	1.74794
n _F	486.1	1.75564
n _{F'}	480.0	1.75661
n _g	435.8	1.76500
n _h	404.7	1.77294
n _i	365.0	1.78683
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	1.66486969E+000
L ₁	8.95646712E-003
K ₂	3.01622480E-001
L ₂	3.50299695E-002
K ₃	1.19738880E+000
L ₃	1.23334438E+002

折射率温度系数常数 Constants of dn/dt	
D ₀	-3.14E-06
D ₁	1.29E-08
D ₂	-3.08E-11
E ₀	6.91E-07
E ₁	5.97E-10
λ _{TK} (μm)	2.23E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	-0.1	0.5	0.7	0.9	1.5	2.0
-40~-20	-0.1	0.5	0.7	0.9	1.5	2.2
-20~0	0.0	0.8	1.1	1.3	2.0	2.6
0~20	0.2	0.9	1.2	1.7	2.1	2.7
20~40	0.2	0.9	1.3	1.6	2.2	2.7
40~60	0.3	1.1	1.3	1.6	2.5	3.1
60~80	0.4	1.1	1.4	1.7	2.5	3.2
80~100	0.5	1.0	1.4	1.7	2.5	3.2
100~120	0.6	1.2	1.6	1.8	2.5	3.6
120~140	0.8	1.6	1.9	2.3	3.0	3.6

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2406	P' _{s,t}	0.2378
P _{C,s}	0.5022	P' _{C',s}	0.5428
P _{d,C}	0.2976	P' _{d,C'}	0.2479
P _{e,d}	0.2377	P' _{e,d}	0.2350
P _{g,F}	0.5651	P' _{g,F'}	0.5007
P _{ih}	0.8383	P' _{ih}	0.8286

异常色散 Abnormal Dispersions			
ΔP _{C,t}	-0.0150	ΔP _{C,s}	-0.0057
ΔP _{F,e}	-0.0005	ΔP _{g,F}	-0.0041

热性质 Thermal Properties	
T _g (℃)	618
T _S (℃)	680
T ₁₀ ^{14.5} (℃)	582
T ₁₀ ¹³ (℃)	616
T ₁₀ ^{7.6} (℃)	751
α _{-30/70℃} (10 ⁻⁷ /K)	80
α _{100/300℃} (10 ⁻⁷ /K)	97
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	568
F _A	182
E(10 ⁷ Pa)	9781
G(10 ⁷ Pa)	3780
μ	0.294
B(10 ⁻¹² /Pa)	1.51

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.902	0.814
2200	0.957	0.915
2000	0.960	0.921
1800	0.990	0.980
1600	0.997	0.994
1400	0.998	0.996
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	0.998	0.996
700	0.998	0.997
650	0.998	0.997
600	0.999	0.998
550	0.999	0.999
500	0.998	0.997
480	0.998	0.997
460	0.997	0.995
440	0.996	0.992
420	0.994	0.988
400	0.986	0.973
390	0.978	0.957
380	0.961	0.923
370	0.923	0.852
360	0.843	0.710
350	0.671	0.450
340	0.352	0.124
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	380/335
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.39

退火增值系数 ECFA.	
β	105

备注 Remarks	

H-LaF4S	750350	n _d = 1.74950	v _d = 34.99	n _F -n _C = 0.02142
		n _e = 1.75457	v _e = 34.72	n _{F'} -n _{C'} = 0.02173

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.70616
n _{1970.1}	1970.1	1.71203
n _{1529.6}	1529.6	1.71870
n _{1060.0}	1060.0	1.72695
n _t	1014.0	1.72803
n _s	852.1	1.72803
n _r	706.5	1.73979
n _C	656.3	1.74324
n _{C'}	643.9	1.74422
n _{He-Ne}	632.8	1.74514
n _D	589.3	1.74931
n _d	587.6	1.74950
n _e	546.1	1.75457
n _F	486.1	1.76466
n _{F'}	480.0	1.76595
n _g	435.8	1.77728
n _h	404.7	1.78833
n _i	365.0	1.80864
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	2.10645313E-001
L ₁	5.42759294E-002
K ₂	1.75547352E+000
L ₂	1.12370777E-002
K ₃	1.28979005E+000
L ₃	1.19852069E+002

折射率温度系数常数 Constants of dn/dt	
D ₀	6.53E-07
D ₁	1.81E-08
D ₂	-1.59E-10
E ₀	9.02E-07
E ₁	8.16E-10
λ _{TK} (μm)	2.46E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	1.3	2.0	2.7	2.9	3.4	4.4
-20~0	2.0	3.1	3.3	3.5	4.7	5.7
0~20	2.4	3.5	3.6	4.3	5.1	6.3
20~40	2.5	3.4	3.9	4.2	5.4	6.2
40~60	2.5	3.5	4.0	4.5	5.6	6.6
60~80	2.8	3.8	4.4	4.6	5.6	6.9
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2262	P' _{s,t}	0.2230
P _{C,s}	0.4835	P' _{C',s}	0.5217
P _{d,C}	0.2925	P' _{d,C'}	0.2432
P _{e,d}	0.2367	P' _{e,d}	0.2333
P _{g,F}	0.5892	P' _{g,F'}	0.5215
P _{i,h}	0.9479	P' _{i,h}	0.9344

异常色散 Abnormal Dispersions			
ΔP _{C,t}	-0.0014	ΔP _{C,s}	-0.0010
ΔP _{F,e}	0.0004	ΔP _{g,F}	0.0031

热性质 Thermal Properties	
T _g (℃)	580
T _g (℃)	630
T ₁₀ ^{14.5} (℃)	535
T ₁₀ ¹³ (℃)	568
T ₁₀ ^{7.6} (℃)	704
α _{30/70℃} (10 ⁻⁷ /K)	83
α _{100/300℃} (10 ⁻⁷ /K)	95
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	2
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	545
F _A	178
E(10 ⁷ Pa)	9105
G(10 ⁷ Pa)	3563
μ	0.278
B(10 ⁻¹² /Pa)	2.42

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.917	0.841
2200	0.962	0.926
2000	0.985	0.971
1800	0.992	0.984
1600	0.997	0.995
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
700	0.998	0.997
650	0.998	0.996
600	0.998	0.996
550	0.997	0.994
500	0.994	0.988
480	0.990	0.981
460	0.987	0.975
440	0.983	0.967
420	0.974	0.948
400	0.949	0.900
390	0.917	0.840
380	0.851	0.725
370	0.691	0.478
360	0.371	0.138
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	405/355
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	3.92

退火增值系数 ECFA.	
β	170

备注 Remarks	

H-LaF5S	754375	$n_d=1.75367$	$v_d=37.49$	$n_F-n_C=0.02010$
		$n_e=1.75843$	$v_e=37.23$	$n_F-n_C=0.02037$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.70936
$n_{1970.1}$	1970.1	1.71602
$n_{1529.6}$	1529.6	1.72339
$n_{1060.0}$	1060.0	1.73198
n_t	1014.0	1.73307
n_s	852.1	1.73307
n_r	706.5	1.74447
n_C	656.3	1.74775
$n_{C'}$	643.9	1.74868
$n_{\text{He-Ne}}$	632.8	1.74955
n_D	589.3	1.75349
n_d	587.6	1.75367
n_e	546.1	1.75843
n_F	486.1	1.76785
$n_{F'}$	480.0	1.76905
n_g	435.8	1.77955
n_h	404.7	1.78972
n_i	365.0	1.80823
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
K_1	1.26562517E+000
L_1	1.02654797E+002
K_2	1.81324770E+000
L_2	1.11614870E-002
K_3	1.73525791E-001
L_3	5.41388764E-002

折射率温度系数常数 Constants of dn/dt	
D_0	-2.04E-07
D_1	2.80E-08
D_2	-1.11E-10
E_0	6.56E-07
E_1	-8.41E-10
$\lambda_{TK}(\mu\text{m})$	2.72E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	0.4	1.2	1.9	2.1	2.4	3.7
-20~0	1.6	1.9	2.3	2.8	3.8	4.7
0~20	1.6	2.1	2.6	3.0	3.9	4.9
20~40	2.1	2.7	3.1	3.4	4.2	5.0
40~60	2.3	3.2	3.4	3.7	4.5	5.2
60~80	2.4	3.2	3.5	3.8	4.7	5.4
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2369	$P'_{s,t}$	0.2338
$P_{C,s}$	0.4936	$P'_{C',s}$	0.5327
$P_{d,C}$	0.2945	$P'_{d,C'}$	0.2449
$P_{e,d}$	0.2369	$P'_{e,d}$	0.2338
$P_{g,F}$	0.5819	$P'_{g,F'}$	0.5153
$P_{i,h}$	0.9207	$P'_{i,h}$	0.9085

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0076	$\Delta P_{C,s}$	0.0032
$\Delta P_{F,e}$	-0.0006	$\Delta P_{g,F}$	0.0001

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	647
$T_S(^{\circ}\text{C})$	687
$T_{10}^{14.5}(^{\circ}\text{C})$	604
$T_{10}^{13}(^{\circ}\text{C})$	640
$T_{10}^{7.6}(^{\circ}\text{C})$	754
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	74
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	84
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	5
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	576
F_A	135
$E(10^7\text{Pa})$	10508
$G(10^7\text{Pa})$	4114
μ	0.277
$B(10^{-12}/\text{Pa})$	1.95

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau_{5\text{mm}}$	$\tau_{10\text{mm}}$
2400	0.906	0.820
2200	0.966	0.934
2000	0.989	0.979
1800	0.997	0.994
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
700	0.998	0.997
650	0.998	0.996
600	0.997	0.995
550	0.996	0.993
500	0.991	0.982
480	0.987	0.974
460	0.983	0.966
440	0.978	0.956
420	0.968	0.937
400	0.946	0.894
390	0.922	0.850
380	0.880	0.770
370	0.770	0.600
360	0.520	0.270
350	0.140	0.020
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	410/350
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.71

退火增值系数 ECFA.	
β	100

备注 Remarks	

H-LaF6S	757477	n _d = 1.75700	v _d = 47.71	n _F -n _C = 0.01587
		n _e = 1.76078	v _e = 47.47	n _F -n _{C'} = 0.01603

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.71377
n _{1970.1}	1970.1	1.72160
n _{1529.6}	1529.6	1.72991
n _{1060.0}	1060.0	1.73863
n _t	1014.0	1.73965
n _s	852.1	1.73965
n _r	706.5	1.74953
n _C	656.3	1.75222
n _{C'}	643.9	1.75298
n _{He-Ne}	632.8	1.75369
n _D	589.3	1.75686
n _d	587.6	1.75700
n _e	546.1	1.76078
n _F	486.1	1.76809
n _{F'}	480.0	1.76901
n _g	435.8	1.77691
n _h	404.7	1.78432
n _i	365.0	1.79717
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	1.12023521E+000
L ₁	3.35766705E-003
K ₂	8.97573526E-001
L ₂	2.27710735E-002
K ₃	1.36654860E+000
L ₃	9.20376324E+001

折射率温度系数常数 Constants of dn/dt	
D ₀	4.32E-06
D ₁	1.59E-08
D ₂	-1.31E-11
E ₀	6.18E-07
E ₁	3.24E-10
λ _{TK} (μm)	1.87E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	4.2	4.7	5.0	5.3	5.7	6.2
-40~-20	4.3	4.8	5.0	5.4	5.8	6.3
-20~0	4.3	4.9	5.2	5.4	6.0	6.5
0~20	4.4	5.0	5.3	5.5	6.1	6.6
20~40	4.5	5.2	5.6	5.7	6.3	6.8
40~60	4.6	5.5	5.8	6.0	6.5	7.0
60~80	4.9	5.7	5.8	6.2	6.7	7.3
80~100	5.3	5.8	6.0	6.3	6.9	7.6
100~120	5.4	6.0	6.3	6.6	7.2	7.8
120~140	5.6	6.2	6.5	6.8	7.4	8.3

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2684	P' _{s,t}	0.2657
P _{C,s}	0.5243	P' _{C',s}	0.5662
P _{d,C}	0.3010	P' _{d,C'}	0.2508
P _{e,d}	0.2380	P' _{e,d}	0.2356
P _{g,F}	0.5557	P' _{g,F'}	0.4928
P _{i,h}	0.8097	P' _{i,h}	0.8015

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0216	ΔP _{C,s}	0.0097
ΔP _{F,e}	-0.0026	ΔP _{g,F}	-0.0088

热性质 Thermal Properties	
T _g (℃)	646
T _g (℃)	680
T ₁₀ ^{14.5} (℃)	603
T ₁₀ ¹³ (℃)	632
T ₁₀ ^{7.6} (℃)	731
α _{-30/70℃} (10 ⁻⁷ /K)	59
α _{100/300℃} (10 ⁻⁷ /K)	69
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	6
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	729
F _A	86
E(10 ⁷ Pa)	11806
G(10 ⁷ Pa)	4570
μ	0.291
B(10 ⁻¹² /Pa)	1.84

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.810	0.650
2200	0.950	0.902
2000	0.982	0.965
1800	0.996	0.992
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
700	0.998	0.997
650	0.998	0.997
600	0.998	0.997
550	0.998	0.997
500	0.997	0.994
480	0.996	0.992
460	0.994	0.989
440	0.992	0.984
420	0.988	0.976
400	0.979	0.958
390	0.969	0.938
380	0.952	0.906
370	0.924	0.853
360	0.880	0.770
350	0.810	0.650
340	0.690	0.480
330	0.510	0.260
320	0.260	0.070
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	390/320
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.06

退火增值系数 ECFA.	
β	150

备注 Remarks	

H-LaF10S	788475	n _d = 1.78800	v _d = 47.49	n _F -n _C = 0.01659
		n _e = 1.79195	v _e = 47.25	n _F -n _{C'} = 0.01676

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.74470
n _{1970.1}	1970.1	1.75227
n _{1529.6}	1529.6	1.76032
n _{1060.0}	1060.0	1.76897
n _t	1014.0	1.76999
n _s	852.1	1.76999
n _r	706.5	1.78019
n _C	656.3	1.78301
n _{C'}	643.9	1.78380
n _{He-Ne}	632.8	1.78454
n _D	589.3	1.78785
n _d	587.6	1.78800
n _e	546.1	1.79195
n _F	486.1	1.79960
n _{F'}	480.0	1.80056
n _g	435.8	1.80881
n _h	404.7	1.81655
n _i	365.0	1.82997
n _{313.2}	313.2	1.85834
n _{302.2}	302.2	1.86710

色散公式常数 Constants of Dispersion Formula	
K ₁	1.93178403E+000
L ₁	9.97340769E-003
K ₂	1.89897276E-001
L ₂	3.68891042E-002
K ₃	1.09736515E+000
L ₃	7.72777489E+001

折射率温度系数常数 Constants of dn/dt	
D ₀	1.87E-06
D ₁	1.68E-08
D ₂	-3.95E-11
E ₀	5.95E-07
E ₁	4.28E-10
λ _{TK} (μm)	1.94E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	2.5	3.0	3.3	3.6	4.2	4.8
-40~-20	2.6	3.1	3.6	3.6	4.3	4.8
-20~0	2.7	3.4	3.7	3.7	4.3	4.9
0~20	3.1	3.8	3.9	4.2	4.8	5.1
20~40	3.3	4.0	4.0	4.5	4.8	5.4
40~60	3.5	4.2	4.3	4.6	5.2	5.6
60~80	3.5	4.3	4.4	4.8	5.2	5.9
80~100	3.5	4.3	4.5	4.9	5.4	6.3
100~120	3.7	4.4	4.8	4.8	5.7	6.3
120~140	3.8	4.4	4.9	5.1	6.1	6.4

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2630	P' _{s,t}	0.2603
P _{C,s}	0.5214	P' _{C',s}	0.5634
P _{d,C}	0.3009	P' _{d,C'}	0.2507
P _{e,d}	0.2381	P' _{e,d}	0.2357
P _{g,F}	0.5551	P' _{g,F'}	0.4924
P _{i,h}	0.8088	P' _{i,h}	0.8007

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0143	ΔP _{C,s}	0.0074
ΔP _{F,e}	-0.0027	ΔP _{g,F}	-0.0097

热性质 Thermal Properties	
T _g (℃)	676
T _g (℃)	702
T ₁₀ ^{14.5} (℃)	636
T ₁₀ ¹³ (℃)	661
T ₁₀ ^{7.6} (℃)	756
α _{30/70℃} (10 ⁻⁷ /K)	67
α _{100/300℃} (10 ⁻⁷ /K)	77
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	652
F _A	100
E(10 ⁷ Pa)	12398
G(10 ⁷ Pa)	4787
μ	0.295
B(10 ⁻¹² /Pa)	1.39

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.823	0.677
2200	0.948	0.900
2000	0.981	0.963
1800	0.994	0.987
1600	0.998	0.995
1400	0.998	0.996
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
700	0.999	0.998
650	0.999	0.997
600	0.998	0.996
550	0.997	0.995
500	0.997	0.994
480	0.996	0.992
460	0.995	0.991
440	0.992	0.985
420	0.990	0.981
400	0.984	0.969
390	0.979	0.958
380	0.970	0.940
370	0.953	0.909
360	0.926	0.857
350	0.879	0.773
340	0.806	0.649
330	0.680	0.462
320	0.449	0.202
310	0.167	0.028
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	380/315
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.32

退火增值系数 ECFA.	
β	150

备注 Remarks	

H-LaF50S	773496	n _d = 1.77250	v _d = 49.60	n _F -n _C = 0.01558
		n _e = 1.77621	v _e = 49.36	n _F -n _C '= 0.01573

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.73042
n _{1970.1}	1970.1	1.73796
n _{1529.6}	1529.6	1.74596
n _{1060.0}	1060.0	1.75443
n _t	1014.0	1.75542
n _s	852.1	1.75542
n _r	706.5	1.76514
n _C	656.3	1.76780
n _{C'}	643.9	1.76854
n _{He-Ne}	632.8	1.76924
n _D	589.3	1.77236
n _d	587.6	1.77250
n _e	546.1	1.77621
n _F	486.1	1.78337
n _{F'}	480.0	1.78427
n _g	435.8	1.79197
n _h	404.7	1.79916
n _i	365.0	1.81154
n _{313.2}	313.2	1.83730
n _{302.2}	302.2	1.84510

色散公式常数 Constants of Dispersion Formula	
K ₁	1.17461263E+000
L ₁	8.26267633E+001
K ₂	1.65889744E+000
L ₂	8.05128060E-003
K ₃	4.13174064E-001
L ₃	2.69612640E-002

折射率温度系数常数 Constants of dn/dt	
D ₀	2.17E-06
D ₁	1.36E-08
D ₂	-3.28E-11
E ₀	5.95E-07
E ₁	8.86E-10
λ _{TK} (μm)	1.61E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	2.7	3.2	3.5	3.6	4.2	4.4
-40~-20	3.0	3.4	3.7	3.9	4.4	4.6
-20~0	3.4	3.9	4.0	4.2	4.6	5.2
0~20	3.2	3.7	3.8	4.1	4.5	5.1
20~40	3.5	4.0	4.3	4.3	5.0	5.6
40~60	3.5	4.2	4.4	4.6	5.2	5.6
60~80	3.2	4.1	4.1	4.7	5.0	5.6
80~100	3.4	4.3	4.5	4.9	5.4	5.9
100~120	3.7	4.5	4.7	5.1	5.7	6.2
120~140	3.9	4.7	4.9	5.1	5.8	6.3

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2685	P' _{s,t}	0.2659
P _{C,s}	0.5264	P' _{C',s}	0.5687
P _{d,C}	0.3019	P' _{d,C'}	0.2516
P _{e,d}	0.2381	P' _{e,d}	0.2359
P _{g,F}	0.5517	P' _{g,F'}	0.4893
P _{i,h}	0.7953	P' _{i,h}	0.7877

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0149	ΔP _{C,s}	0.0074
ΔP _{F,e}	-0.0026	ΔP _{g,F}	-0.0096

热性质 Thermal Properties	
T _g (℃)	676
T _S (℃)	703
T ₁₀ ^{14.5} (℃)	630
T ₁₀ ¹³ (℃)	660
T ₁₀ ^{7.6} (℃)	754
α _{-30/70℃} (10 ⁻⁷ /K)	60
α _{100/300℃} (10 ⁻⁷ /K)	75
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	723
F _A	92
E(10 ⁷ Pa)	12370
G(10 ⁷ Pa)	4793
μ	0.29
B(10 ⁻¹² /Pa)	1.39

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.814	0.662
2200	0.947	0.896
2000	0.981	0.962
1800	0.993	0.987
1600	0.997	0.995
1400	0.998	0.996
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	0.997	0.994
700	0.997	0.994
650	0.997	0.994
600	0.998	0.996
550	0.998	0.996
500	0.998	0.996
480	0.997	0.994
460	0.996	0.993
440	0.993	0.987
420	0.991	0.982
400	0.986	0.973
390	0.980	0.961
380	0.971	0.943
370	0.954	0.911
360	0.926	0.857
350	0.879	0.773
340	0.809	0.654
330	0.706	0.499
320	0.557	0.310
310	0.339	0.115
300	0.122	0.015
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	375/305
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.23

退火增值系数 ECFA.	
β	150

备注 Remarks	

H-LaF51S	700481	$n_d=1.70000$	$v_d=48.08$	$n_F-n_C=0.01456$
		$n_e=1.70346$	$v_e=47.80$	$n_F-n_C=0.01472$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.66348
$n_{1970.1}$	1970.1	1.66962
$n_{1529.6}$	1529.6	1.67626
$n_{1060.0}$	1060.0	1.68353
n_t	1014.0	1.68441
n_s	852.1	1.68441
n_r	706.5	1.69320
n_C	656.3	1.69564
$n_{C'}$	643.9	1.69633
$n_{\text{He-Ne}}$	632.8	1.69698
n_D	589.3	1.69987
n_d	587.6	1.70000
n_e	546.1	1.70346
n_F	486.1	1.71020
$n_{F'}$	480.0	1.71105
n_g	435.8	1.71837
n_h	404.7	1.72529
n_i	365.0	1.73739
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
K_1	1.16091555E+000
L_1	1.02913644E+002
K_2	1.53441573E+000
L_2	7.59735684E-003
K_3	2.93141701E-001
L_3	3.38071716E-002

折射率温度系数常数 Constants of dn/dt	
D_0	-2.02E-06
D_1	1.89E-08
D_2	-1.30E-10
E_0	4.46E-07
E_1	1.77E-10
$\lambda_{TK}(\mu\text{m})$	2.81E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	0.0	0.3	0.5	0.8	0.9	1.5
-20~0	-0.1	0.8	1.2	1.3	1.4	2.3
0~20	0.5	1.2	1.4	1.6	2.0	2.6
20~40	0.8	1.2	1.4	1.5	2.3	2.8
40~60	1.0	1.4	1.4	1.6	2.4	2.9
60~80	1.1	1.3	1.4	1.7	2.5	3.0
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2570	$P'_{s,t}$	0.2542
$P_{C,s}$	0.5146	$P'_{C',s}$	0.5558
$P_{d,C}$	0.2993	$P'_{d,C'}$	0.2493
$P_{e,d}$	0.2378	$P'_{e,d}$	0.2352
$P_{g,F}$	0.5614	$P'_{g,F'}$	0.4977
$P_{i,h}$	0.8307	$P'_{i,h}$	0.8217

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	-0.0012	$\Delta P_{C,s}$	-0.0008
$\Delta P_{F,e}$	-0.0005	$\Delta P_{g,F}$	-0.0024

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	649
$T_g(^{\circ}\text{C})$	686
$T_{10}^{14.5}(^{\circ}\text{C})$	601
$T_{10}^{13}(^{\circ}\text{C})$	629
$T_{10}^{7.6}(^{\circ}\text{C})$	738
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	83
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	94
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	2
D_A	3
CR	2
RC(S)	1
RA(S)	4

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	576
F_A	175
$E(10^7\text{Pa})$	9644
$G(10^7\text{Pa})$	3745
μ	0.288
$B(10^{-12}/\text{Pa})$	1.58

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.861	0.742
2200	0.944	0.891
2000	0.979	0.958
1800	0.989	0.979
1600	0.996	0.992
1400	0.997	0.995
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
700	0.998	0.997
650	0.998	0.996
600	0.997	0.995
550	0.997	0.995
500	0.997	0.994
480	0.996	0.992
460	0.994	0.989
440	0.993	0.987
420	0.991	0.982
400	0.983	0.967
390	0.973	0.947
380	0.954	0.910
370	0.909	0.826
360	0.807	0.652
350	0.589	0.347
340	0.239	0.057
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	380/340
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.82

退火增值系数 ECFA.	
β	140

备注 Remarks	

H-LaF52S	786442	n _d = 1.78590	v _d = 44.19	n _F -n _C = 0.01779
		n _e = 1.79013	v _e = 43.94	n _F -n _{C'} = 0.01798

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.74296
n _{1970.1}	1970.1	1.74995
n _{1529.6}	1529.6	1.75752
n _{1060.0}	1060.0	1.76598
n _t	1014.0	1.76702
n _s	852.1	1.76702
n _r	706.5	1.77761
n _C	656.3	1.78058
n _{C'}	643.9	1.78142
n _{He-Ne}	632.8	1.78221
n _D	589.3	1.78574
n _d	587.6	1.78590
n _e	546.1	1.79013
n _F	486.1	1.79837
n _{F'}	480.0	1.79941
n _g	435.8	1.80837
n _h	404.7	1.81684
n _i	365.0	1.83166
n _{313.2}	313.2	1.86365
n _{302.2}	302.2	1.87373

色散公式常数 Constants of Dispersion Formula	
K ₁	2.25893751E-001
L ₁	3.91551736E-002
K ₂	1.88248028E+000
L ₂	1.00951886E-002
K ₃	1.11307009E+000
L ₃	8.50042906E+001

折射率温度系数常数 Constants of dn/dt	
D ₀	7.32E-06
D ₁	1.67E-08
D ₂	-2.76E-11
E ₀	7.23E-07
E ₁	7.76E-10
λ _{TK} (μm)	2.19E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	5.9	6.7	7.0	7.3	8.1	8.6
-40~-20	6.1	6.7	7.1	7.3	8.1	8.8
-20~0	6.3	6.9	7.3	7.8	8.3	9.1
0~20	6.4	7.1	7.5	7.8	8.4	9.3
20~40	6.4	7.5	7.7	7.9	9.0	9.6
40~60	6.5	7.6	8.0	8.4	9.2	10.0
60~80	7.1	8.1	8.3	8.7	9.5	10.3
80~100	7.3	8.3	8.4	8.9	9.6	10.7
100~120	7.4	8.3	8.7	9.0	9.9	10.9
120~140	7.4	8.4	8.7	9.0	9.9	10.9

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2518	P' _{s,t}	0.2490
P _{C,s}	0.5109	P' _{C',s}	0.5519
P _{d,C}	0.2989	P' _{d,C'}	0.2489
P _{e,d}	0.2378	P' _{e,d}	0.2352
P _{g,F}	0.5622	P' _{g,F'}	0.4983
P _{i,h}	0.8332	P' _{i,h}	0.8240

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0082	ΔP _{C,s}	0.0047
ΔP _{F,e}	-0.0022	ΔP _{g,F}	-0.0083

热性质 Thermal Properties	
T _g (℃)	605
T _g (℃)	633
T ₁₀ ^{14.5} (℃)	558
T ₁₀ ¹³ (℃)	584
T ₁₀ ^{7.6} (℃)	686
α _{30/70℃} (10 ⁻⁷ /K)	56
α _{100/300℃} (10 ⁻⁷ /K)	66
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	2
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	668
F _A	94
E(10 ⁷ Pa)	11290
G(10 ⁷ Pa)	4350
μ	0.297
B(10 ⁻¹² /Pa)	2.13

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.853	0.728
2200	0.962	0.925
2000	0.985	0.970
1800	0.995	0.990
1600	0.998	0.997
1400	0.999	0.997
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	0.998	0.996
700	0.998	0.996
650	0.998	0.996
600	0.997	0.995
550	0.997	0.994
500	0.996	0.993
480	0.995	0.991
460	0.993	0.987
440	0.989	0.979
420	0.985	0.971
400	0.977	0.954
390	0.966	0.934
380	0.951	0.905
370	0.920	0.847
360	0.871	0.759
350	0.793	0.629
340	0.676	0.457
330	0.504	0.254
320	0.265	0.070
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	385/320
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.37

退火增值系数 ECFA.	
β	120

备注 Remarks	

H-LaF53S	743492	$n_d=1.74330$	$v_d=49.22$	$n_F-n_C=0.01510$
		$n_e=1.74690$	$v_e=48.98$	$n_F-n_C=0.01525$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.70290
$n_{1970.1}$	1970.1	1.71009
$n_{1529.6}$	1529.6	1.71773
$n_{1060.0}$	1060.0	1.72584
n_t	1014.0	1.72680
n_s	852.1	1.72680
n_r	706.5	1.73618
n_C	656.3	1.73875
$n_{C'}$	643.9	1.73947
$n_{\text{He-Ne}}$	632.8	1.74014
n_D	589.3	1.74317
n_d	587.6	1.74330
n_e	546.1	1.74690
n_F	486.1	1.75385
$n_{F'}$	480.0	1.75472
n_g	435.8	1.76220
n_h	404.7	1.76920
n_i	365.0	1.78127
$n_{313.2}$	313.2	1.80644
$n_{302.2}$	302.2	1.81408

色散公式常数 Constants of Dispersion Formula	
K_1	1.52005515E+000
L_1	7.46606502E-003
K_2	1.09140777E+000
L_2	8.19422153E+001
K_3	4.52588708E-001
L_3	2.63954349E-002

折射率温度系数常数 Constants of dn/dt	
D_0	8.12E-06
D_1	1.80E-08
D_2	-3.55E-11
E_0	6.59E-07
E_1	7.00E-10
$\lambda_{TK}(\mu\text{m})$	1.85E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^\circ\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	5.9	6.7	7.0	7.1	7.7	8.4
-40~-20	6.1	6.8	7.0	7.2	7.8	8.4
-20~0	6.3	7.1	7.2	7.4	7.9	8.5
0~20	6.6	7.2	7.4	7.7	8.2	8.8
20~40	6.8	7.6	7.7	8.1	8.7	9.3
40~60	6.9	7.8	8.0	8.3	9.0	9.5
60~80	7.0	7.8	8.2	8.6	8.9	9.7
80~100	7.2	8.0	8.5	8.6	9.1	10.0
100~120	7.4	8.3	8.6	8.8	9.5	10.3
120~140	7.5	8.4	8.7	8.9	9.8	10.5

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2668	$P'_{s,t}$	0.2642
$P_{C,s}$	0.5247	$P'_{C',s}$	0.5669
$P_{d,C}$	0.3015	$P'_{d,C'}$	0.2512
$P_{e,d}$	0.2381	$P'_{e,d}$	0.2358
$P_{g,F}$	0.5529	$P'_{g,F'}$	0.4905
$P_{i,h}$	0.7994	$P'_{i,h}$	0.7917

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0133	$\Delta P_{C,s}$	0.0066
$\Delta P_{F,e}$	-0.0024	$\Delta P_{g,F}$	-0.0090

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	590
$T_S(^{\circ}\text{C})$	621
$T_{10}^{14.5}(^{\circ}\text{C})$	550
$T_{10}^{13}(^{\circ}\text{C})$	582
$T_{10}^{7.6}(^{\circ}\text{C})$	682
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	58
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	73
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	698
F_A	104
$E(10^7\text{Pa})$	10678
$G(10^7\text{Pa})$	4084
μ	0.307
$B(10^{-12}/\text{Pa})$	2.21

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.800	0.640
2200	0.939	0.881
2000	0.976	0.952
1800	0.989	0.979
1600	0.996	0.992
1400	0.998	0.996
1200	0.998	0.997
1060	0.999	0.998
1000	0.999	0.998
950	0.999	0.998
900	0.999	0.997
850	0.998	0.996
800	0.998	0.995
700	0.997	0.994
650	0.997	0.993
600	0.997	0.993
550	0.997	0.993
500	0.995	0.990
480	0.993	0.987
460	0.992	0.984
440	0.988	0.977
420	0.985	0.970
400	0.978	0.956
390	0.970	0.940
380	0.954	0.910
370	0.930	0.860
360	0.880	0.780
350	0.810	0.650
340	0.710	0.500
330	0.570	0.320
320	0.410	0.170
310	0.250	0.060
300	0.100	0.010
290		
280		

着色度 Color Code	
λ_{80}/λ_5	370/300
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	4.14

退火增值系数 ECFA.	
β	150

备注 Remarks	

H-LaF54S	800422	n _d = 1.79952	v _d = 42.24	n _F -n _C = 0.01893
		n _e = 1.80401	v _e = 42.00	n _F -n _{C'} = 0.01915

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	
n _{1970.1}	1970.1	
n _{1529.6}	1529.6	
n _{1060.0}	1060.0	
n _t	1014.0	1.77963
n _s	852.1	1.77963
n _r	706.5	1.79072
n _C	656.3	1.79387
n _{C'}	643.9	1.79476
n _{He-Ne}	632.8	1.79560
n _D	589.3	1.79935
n _d	587.6	1.79952
n _e	546.1	1.80401
n _F	486.1	1.81280
n _{F'}	480.0	1.81391
n _g	435.8	1.82354
n _h	404.7	1.83270
n _i	365.0	1.84881
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
A ₀	3.14470202E+000
A ₁	-1.01059060E-002
A ₂	3.43096974E-002
A ₃	-8.33127912E-004
A ₄	2.17008428E-004
A ₅	-8.70147899E-006

折射率温度系数常数 Constants of dn/dt	
D ₀	6.31E-06
D ₁	2.13E-08
D ₂	9.75E-11
E ₀	1.02E-06
E ₁	2.29E-10
λ _{TK} (μm)	7.70E-02

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	6.0	7.0	7.3	7.6	8.1	9.1
-20~0	6.0	7.0	7.2	7.4	8.7	9.1
0~20	5.9	7.1	7.2	7.7	8.4	9.1
20~40	6.2	7.3	8.0	8.2	8.5	9.3
40~60	6.8	7.5	8.5	8.7	9.3	10.0
60~80	7.4	8.1	8.6	9.1	9.9	11.1
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2446	P' _{s,t}	0.2418
P _{C,s}	0.5077	P' _{C',s}	0.5484
P _{d,C}	0.2983	P' _{d,C'}	0.2486
P _{e,d}	0.2372	P' _{e,d}	0.2345
P _{g,F}	0.5674	P' _{g,F'}	0.5030
P _{ih}		P' _{ih}	

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0071	ΔP _{C,s}	0.0061
ΔP _{F,e}	-0.0021	ΔP _{g,F}	-0.0064

热性质 Thermal Properties	
T _g (℃)	602
T _S (℃)	630
T ₁₀ ^{14.5} (℃)	559
T ₁₀ ¹³ (℃)	587
T ₁₀ ^{7.6} (℃)	687
α _{-30/70℃} (10 ⁻⁷ /K)	59
α _{100/300℃} (10 ⁻⁷ /K)	70
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	2
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	698
F _A	104
E(10 ⁷ Pa)	11076
G(10 ⁷ Pa)	4249
μ	0.303
B(10 ⁻¹² /Pa)	2.16

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.850	0.730
2200	0.960	0.921
2000	0.984	0.969
1800	0.995	0.990
1600	0.998	0.996
1400	0.999	0.998
1200	0.999	0.998
1060	0.998	0.997
1000	0.998	0.997
950	0.998	0.996
900	0.998	0.996
850	0.998	0.996
800	0.998	0.997
700	0.998	0.997
650	0.998	0.997
600	0.998	0.996
550	0.997	0.995
500	0.997	0.994
480	0.996	0.993
460	0.995	0.991
440	0.992	0.985
420	0.987	0.974
400	0.974	0.949
390	0.961	0.924
380	0.949	0.900
370	0.900	0.810
360	0.820	0.680
350	0.680	0.460
340	0.380	0.150
330	0.080	0.010
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	395/335
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.46

退火增值系数 ECFA.	
β	140

备注 Remarks	

H-LaF54A [*]	800422	n _d = 1.79952	v _d = 42.24	n _F -n _C = 0.01893
		n _e = 1.80401	v _e = 41.98	n _F -n _{C'} = 0.01915

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	
n _{1970.1}	1970.1	
n _{1529.6}	1529.6	
n _{1060.0}	1060.0	
n _t	1014.0	1.77964
n _s	852.1	1.77963
n _r	706.5	1.79071
n _C	656.3	1.79387
n _{C'}	643.9	1.79476
n _{He-Ne}	632.8	1.79560
n _D	589.3	1.79934
n _d	587.6	1.79952
n _e	546.1	1.80401
n _F	486.1	1.81280
n _{F'}	480.0	1.81391
n _g	435.8	1.82355
n _h	404.7	1.83271
n _i	365.0	1.84881
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
A ₀	3.14470200E+000
A ₁	-1.01059060E-002
A ₂	3.43096970E-002
A ₃	-8.33127910E-004
A ₄	2.17008430E-004
A ₅	-8.70147900E-006

折射率温度系数常数 Constants of dn/dt	
D ₀	6.31E-06
D ₁	2.13E-08
D ₂	9.75E-11
E ₀	1.02E-06
E ₁	2.29E-10
λ _{TK} (μm)	7.70E-02

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	6.0	7.0	7.3	7.6	8.1	9.1
-20~0	6.0	7.0	7.2	7.4	8.7	9.1
0~20	5.9	7.1	7.2	7.7	8.4	9.1
20~40	6.2	7.3	8.0	8.2	8.5	9.3
40~60	6.8	7.5	8.5	8.7	9.3	10.0
60~80	7.4	8.1	8.6	9.1	9.9	11.1
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}		P' _{s,t}	
P _{C,s}		P' _{C',s}	
P _{d,C}	0.2985	P' _{d,C'}	0.2486
P _{e,d}	0.2372	P' _{e,d}	0.2345
P _{g,F}	0.5679	P' _{g,F'}	0.5034
P _{i,h}		P' _{i,h}	

异常色散 Abnormal Dispersions			
ΔP _{C,t}		ΔP _{C,s}	
ΔP _{F,e}	-0.0022	ΔP _{g,F}	-0.0059

热性质 Thermal Properties	
T _g (℃)	664
T _g (℃)	699
T ₁₀ ^{14.5} (℃)	
T ₁₀ ¹³ (℃)	
T ₁₀ ^{7.6} (℃)	
α _{-30/70℃} (10 ⁻⁷ /K)	63
α _{100/300℃} (10 ⁻⁷ /K)	78
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	2
CR	
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	698
F _A	104
E(10 ⁷ Pa)	11076
G(10 ⁷ Pa)	4249
μ	0.303
B(10 ⁻¹² /Pa)	

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.850	0.730
2200	0.960	0.921
2000	0.984	0.969
1800	0.995	0.990
1600	0.998	0.996
1400	0.999	0.998
1200	0.999	0.998
1060	0.998	0.997
1000	0.998	0.997
950	0.998	0.996
900	0.998	0.996
850	0.998	0.996
800	0.998	0.997
700	0.998	0.997
650	0.998	0.997
600	0.998	0.996
550	0.997	0.995
500	0.997	0.994
480	0.996	0.993
460	0.995	0.991
440	0.992	0.985
420	0.987	0.974
400	0.974	0.949
390	0.961	0.924
380	0.949	0.900
370	0.900	0.810
360	0.820	0.680
350	0.680	0.460
340	0.380	0.150
330	0.080	0.010
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	395/335
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.23

退火增值系数 ECFA.	
β	160

备注 Remarks	

H-LaF55S	762401	$n_d=1.76200$	$v_d=40.11$	$n_F-n_C=0.01900$
		$n_e=1.76651$	$v_e=39.83$	$n_F-n_C=0.01924$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.72181
$n_{1970.1}$	1970.1	1.72746
$n_{1529.6}$	1529.6	1.73382
$n_{1060.0}$	1060.0	1.74155
n_t	1014.0	1.74255
n_s	852.1	1.74255
n_r	706.5	1.75328
n_C	656.3	1.75639
$n_{C'}$	643.9	1.75727
$n_{\text{He-Ne}}$	632.8	1.75810
n_D	589.3	1.76183
n_d	587.6	1.76200
n_e	546.1	1.76651
n_F	486.1	1.77539
$n_{F'}$	480.0	1.77651
n_g	435.8	1.78631
n_h	404.7	1.79568
n_i	365.0	1.81237
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
K_1	1.73920103E+000
L_1	9.74400845E-003
K_2	1.16162575E+000
L_2	1.11118099E+002
K_3	2.79488106E-001
L_3	4.23325277E-002

折射率温度系数常数 Constants of dn/dt	
D_0	-2.76E-06
D_1	1.53E-08
D_2	-4.05E-11
E_0	7.53E-07
E_1	5.10E-10
$\lambda_{TK}(\mu\text{m})$	2.41E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^\circ\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	0.0	0.8	1.1	1.3	2.1	2.7
-40~-20	0.1	0.8	1.1	1.4	2.1	3.0
-20~0	0.2	1.0	1.2	1.5	2.2	3.2
0~20	0.4	1.2	1.4	1.8	2.4	3.5
20~40	0.6	1.3	1.6	2.1	2.7	3.6
40~60	0.7	1.4	1.8	2.2	3.0	3.8
60~80	0.7	1.5	2.0	2.3	3.2	3.9
80~100	0.8	1.7	2.0	2.3	3.3	4.2
100~120	0.8	1.7	2.1	2.3	3.4	4.3
120~140	0.9	1.9	2.3	2.4	3.5	4.4

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2342	$P'_{s,t}$	0.2312
$P_{C,s}$	0.4940	$P'_{C',s}$	0.5336
$P_{d,C}$	0.2955	$P'_{d,C'}$	0.2459
$P_{e,d}$	0.2373	$P'_{e,d}$	0.2343
$P_{g,F}$	0.5747	$P'_{g,F'}$	0.5089
$P_{i,h}$	0.8784	$P'_{i,h}$	0.8672

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	-0.0071	$\Delta P_{C,s}$	-0.0025
$\Delta P_{F,e}$	-0.0005	$\Delta P_{g,F}$	-0.0027

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	619
$T_g(^{\circ}\text{C})$	673
$T_{10}^{14.5}(^{\circ}\text{C})$	578
$T_{10}^{13}(^{\circ}\text{C})$	613
$T_{10}^{7.6}(^{\circ}\text{C})$	746
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	82
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	95
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	2
D_A	3
CR	1
RC(S)	1
RA(S)	4

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	506
F_A	179
$E(10^7\text{Pa})$	9460
$G(10^7\text{Pa})$	3663
μ	0.291
$B(10^{-12}/\text{Pa})$	1.68

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.903	0.815
2200	0.957	0.916
2000	0.981	0.962
1800	0.990	0.981
1600	0.997	0.994
1400	0.998	0.996
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	0.998	0.996
700	0.998	0.996
650	0.997	0.995
600	0.997	0.995
550	0.997	0.995
500	0.996	0.992
480	0.995	0.990
460	0.994	0.988
440	0.991	0.982
420	0.987	0.975
400	0.977	0.954
390	0.963	0.928
380	0.936	0.876
370	0.879	0.772
360	0.748	0.559
350	0.477	0.228
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	385/340
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	4.30

退火增值系数 ECFA.	
β	

备注 Remarks	

H-LaF62S	720437	n _d = 1.72000	v _d = 43.68	n _F -n _C = 0.01648
		n _e = 1.72392	v _e = 43.40	n _{F'} -n _{C'} = 0.01668

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.68320
n _{1970.1}	1970.1	1.68867
n _{1529.6}	1529.6	1.69476
n _{1060.0}	1060.0	1.70193
n _t	1014.0	1.70284
n _s	852.1	1.70284
n _r	706.5	1.71238
n _C	656.3	1.71510
n _{C'}	643.9	1.71587
n _{He-Ne}	632.8	1.71660
n _D	589.3	1.71986
n _d	587.6	1.72000
n _e	546.1	1.72392
n _F	486.1	1.73159
n _{F'}	480.0	1.73256
n _g	435.8	1.74096
n _h	404.7	1.74895
n _i	365.0	1.76308
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	1.68895143E+000
L ₁	9.69035554E-003
K ₂	1.96642406E-001
L ₂	4.23750782E-002
K ₃	1.18909464E+000
L ₃	1.18147033E+002

折射率温度系数常数 Constants of dn/dt	
D ₀	3.69E-06
D ₁	1.78E-08
D ₂	-1.65E-10
E ₀	7.29E-07
E ₁	1.87E-10
λ _{TK} (μm)	2.06E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	3.1	3.6	3.9	4.1	4.8	5.5
-20~0	3.6	4.1	4.4	4.9	5.7	6.0
0~20	4.0	4.7	5.1	5.3	5.9	6.7
20~40	4.1	4.8	5.1	5.4	5.9	6.7
40~60	4.1	4.8	5.1	5.5	5.9	6.8
60~80	4.1	4.8	5.1	5.5	6.0	6.8
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2419	P' _{s,t}	0.2391
P _{C,s}	0.5018	P' _{C',s}	0.5421
P _{d,C}	0.2971	P' _{d,C'}	0.2473
P _{e,d}	0.2376	P' _{e,d}	0.2348
P _{g,F}	0.5686	P' _{g,F'}	0.5038
P _{i,h}	0.8568	P' _{i,h}	0.8466

异常色散 Abnormal Dispersions			
ΔP _{C,t}	-0.0083	ΔP _{C,s}	-0.0032
ΔP _{F,e}	-0.0004	ΔP _{g,F}	-0.0027

热性质 Thermal Properties	
T _g (℃)	584
T _g (℃)	637
T ₁₀ ^{14.5} (℃)	538
T ₁₀ ¹³ (℃)	576
T ₁₀ ^{7.6} (℃)	
α _{-30/70℃} (10 ⁻⁷ /K)	73
α _{100/300℃} (10 ⁻⁷ /K)	88
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	578
F _A	173
E(10 ⁷ Pa)	10143
G(10 ⁷ Pa)	3925
μ	0.292
B(10 ⁻¹² /Pa)	2.01

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.925	0.856
2200	0.969	0.939
2000	0.987	0.974
1800	0.993	0.986
1600	0.997	0.995
1400	0.998	0.996
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	0.998	0.996
700	0.998	0.996
650	0.998	0.996
600	0.998	0.996
550	0.997	0.995
500	0.996	0.993
480	0.994	0.989
460	0.994	0.988
440	0.991	0.982
420	0.988	0.977
400	0.979	0.958
390	0.967	0.936
380	0.947	0.897
370	0.904	0.817
360	0.806	0.650
350	0.581	0.338
340	0.217	0.047
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	390/340
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	3.89

退火增值系数 ECFA.	
β	110

备注 Remarks	

H-LaK1S	660574	$n_d=1.65950$	$v_d=57.35$	$n_F-n_C=0.01150$
		$n_e=1.66224$	$v_e=57.08$	$n_F-n_C'=0.01160$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.62729
$n_{1970.1}$	1970.1	1.63317
$n_{1529.6}$	1529.6	1.63942
$n_{1060.0}$	1060.0	1.64595
n_t	1014.0	1.64671
n_s	852.1	1.64671
n_r	706.5	1.65403
n_C	656.3	1.65601
$n_{C'}$	643.9	1.65657
$n_{\text{He-Ne}}$	632.8	1.65708
n_D	589.3	1.65940
n_d	587.6	1.65950
n_e	546.1	1.66224
n_F	486.1	1.66751
$n_{F'}$	480.0	1.66817
n_g	435.8	1.67379
n_h	404.7	1.67901
n_i	365.0	1.68793
$n_{313.2}$	313.2	1.70614
$n_{302.2}$	302.2	1.71156

色散公式常数 Constants of Dispersion Formula	
K_1	9.64886701E-001
L_1	9.11939330E+001
K_2	4.68480585E-001
L_2	2.05810529E-002
K_3	1.23722796E+000
L_3	6.08509423E-003

折射率温度系数常数 Constants of dn/dt	
D_0	-5.01E-06
D_1	2.49E-08
D_2	-4.65E-11
E_0	5.72E-07
E_1	-7.93E-10
$\lambda_{TK}(\mu\text{m})$	6.00E-02

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^\circ\text{C}$)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	-1.8	-1.4	-0.5	-0.2	-0.1	0.2
-20~0	-1.1	-0.8	-0.4	-0.3	-0.1	0.1
0~20	-1.1	-0.6	-0.4	-0.2	0.0	0.2
20~40	-0.5	-0.1	0.0	0.2	0.4	0.8
40~60	-0.2	0.0	0.0	0.2	0.6	1.0
60~80	-0.2	-0.1	0.0	0.2	0.7	1.2
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2756	$P'_{s,t}$	0.2731
$P_{C,s}$	0.5336	$P'_{C',s}$	0.5766
$P_{d,C}$	0.3034	$P'_{d,C'}$	0.2530
$P_{e,d}$	0.2384	$P'_{e,d}$	0.2363
$P_{g,F}$	0.5459	$P'_{g,F'}$	0.4844
$P_{i,h}$	0.7754	$P'_{i,h}$	0.7685

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	-0.0073	$\Delta P_{C,s}$	-0.0038
$\Delta P_{F,e}$	-0.0002	$\Delta P_{g,F}$	-0.0021

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	655
$T_g(^{\circ}\text{C})$	683
$T_{10}^{14.5}(^{\circ}\text{C})$	601
$T_{10}^{13}(^{\circ}\text{C})$	629
$T_{10}^{7.6}(^{\circ}\text{C})$	739
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	80
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	87
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	3
D_A	6
CR	4a
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	560
F_A	176
$E(10^7\text{Pa})$	8873
$G(10^7\text{Pa})$	3463
μ	0.281
$B(10^{-12}/\text{Pa})$	1.45

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.890	0.790
2200	0.966	0.933
2000	0.990	0.981
1800	0.997	0.994
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	0.998	0.996
800	0.996	0.992
700	0.995	0.991
650	0.995	0.990
600	0.995	0.990
550	0.995	0.990
500	0.994	0.989
480	0.993	0.987
460	0.992	0.985
440	0.991	0.983
420	0.990	0.981
400	0.987	0.974
390	0.983	0.966
380	0.976	0.952
370	0.963	0.927
360	0.939	0.880
350	0.901	0.810
340	0.840	0.700
330	0.740	0.550
320	0.620	0.380
310	0.470	0.220
300	0.320	0.100
290	0.200	0.040
280		

着色度 Color Code	
λ_{80}/λ_5	360/310
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.94

退火增值系数 ECFA.	
β	125

备注 Remarks	

H-LaK2S	692545	n _d = 1.69211	v _d = 54.54	n _F -n _C = 0.01269
		n _e = 1.69514	v _e = 54.28	n _F -n _{C'} = 0.01281

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.65768
n _{1970.1}	1970.1	1.66384
n _{1529.6}	1529.6	1.67038
n _{1060.0}	1060.0	1.67731
n _t	1014.0	1.67813
n _s	852.1	1.67813
n _r	706.5	1.68609
n _C	656.3	1.68827
n _{C'}	643.9	1.68888
n _{He-Ne}	632.8	1.68945
n _D	589.3	1.69200
n _d	587.6	1.69211
n _e	546.1	1.69514
n _F	486.1	1.70096
n _{F'}	480.0	1.70169
n _g	435.8	1.70791
n _h	404.7	1.71371
n _i	365.0	1.72361
n _{313.2}	313.2	1.74388
n _{302.2}	302.2	1.74992

色散公式常数 Constants of Dispersion Formula	
K ₁	9.14808038E-001
L ₁	8.23260698E+001
K ₂	1.00522491E+000
L ₂	4.50504400E-003
K ₃	8.03415958E-001
L ₃	1.83713420E-002

折射率温度系数常数 Constants of dn/dt	
D ₀	-5.16E-06
D ₁	1.42E-08
D ₂	-4.62E-11
E ₀	5.61E-07
E ₁	5.14E-10
λ _{TK} (μm)	1.55E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	-1.2	-0.7	-0.6	-0.5	0.0	0.1
-40~-20	-1.0	-0.6	-0.4	-0.4	0.2	0.3
-20~0	-1.3	-0.8	-0.6	-0.4	-0.2	0.1
0~20	-1.0	-0.7	-0.5	-0.2	-0.1	0.5
20~40	-0.9	-0.3	-0.3	-0.1	0.5	0.7
40~60	-0.8	-0.2	-0.1	0.0	0.5	0.9
60~80	-0.8	-0.1	0.0	0.1	0.7	0.9
80~100	-0.8	-0.3	-0.2	0.2	0.4	1.0
100~120	-0.8	-0.3	0.0	0.1	0.5	1.0
120~140	-0.7	-0.2	-0.1	0.1	0.5	1.1

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2701	P' _{s,t}	0.2677
P _{C,s}	0.5290	P' _{C',s}	0.5718
P _{d,C}	0.3027	P' _{d,C'}	0.2523
P _{e,d}	0.2384	P' _{e,d}	0.2362
P _{g,F}	0.5480	P' _{g,F'}	0.4862
P _{i,h}	0.7806	P' _{i,h}	0.7735

异常色散 Abnormal Dispersions			
ΔP _{C,t}	-0.0041	ΔP _{C,s}	-0.0017
ΔP _{F,e}	-0.0009	ΔP _{g,F}	-0.0048

热性质 Thermal Properties	
T _g (℃)	630
T _g (℃)	658
T ₁₀ ^{14.5} (℃)	589
T ₁₀ ¹³ (℃)	612
T ₁₀ ^{7.6} (℃)	710
α _{-30/70℃} (10 ⁻⁷ /K)	80
α _{100/300℃} (10 ⁻⁷ /K)	86
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	3
D _A	3
CR	2
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	535
F _A	159
E(10 ⁷ Pa)	9415
G(10 ⁷ Pa)	3635
μ	0.295
B(10 ⁻¹² /Pa)	1.50

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.820	0.673
2200	0.932	0.869
2000	0.975	0.950
1800	0.988	0.977
1600	0.995	0.991
1400	0.997	0.994
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	0.997	0.995
700	0.997	0.995
650	0.997	0.995
600	0.997	0.995
550	0.997	0.995
500	0.997	0.994
480	0.996	0.992
460	0.995	0.990
440	0.993	0.987
420	0.991	0.983
400	0.985	0.970
390	0.977	0.954
380	0.961	0.923
370	0.928	0.862
360	0.872	0.761
350	0.783	0.613
340	0.650	0.422
330	0.489	0.239
320	0.319	0.102
310	0.184	0.034
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	375/310
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	3.91

退火增值系数 ECFA.	
β	110

备注 Remarks	

H-LaK3S	747510	$n_d=1.74693$	$v_d=50.95$	$n_F-n_C=0.01466$
		$n_e=1.75042$	$v_e=50.71$	$n_F-n_C=0.01480$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.70614
$n_{1970.1}$	1970.1	1.71361
$n_{1529.6}$	1529.6	1.72152
$n_{1060.0}$	1060.0	1.72978
n_t	1014.0	1.73074
n_s	852.1	1.73074
n_r	706.5	1.73999
n_C	656.3	1.74250
$n_{C'}$	643.9	1.74320
$n_{\text{He-Ne}}$	632.8	1.74386
n_D	589.3	1.74680
n_d	587.6	1.74693
n_e	546.1	1.75042
n_F	486.1	1.75716
$n_{F'}$	480.0	1.75800
n_g	435.8	1.76523
n_h	404.7	1.77197
n_i	365.0	1.78356
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
K_1	1.27801447E+000
L_1	9.06830082E+001
K_2	1.19473815E+000
L_2	1.81704833E-002
K_3	7.93028102E-001
L_3	1.08737276E-003

折射率温度系数常数 Constants of dn/dt	
D_0	
D_1	
D_2	
E_0	
E_1	
$\lambda_{\text{TK}}(\mu\text{m})$	

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	1.9	2.8	3.1	3.2	3.9	4.3
-20~0	2.7	3.2	3.9	4.0	4.4	4.6
0~20	2.9	3.6	4.1	4.5	4.9	5.3
20~40	3.5	4.1	4.2	4.5	5.2	5.8
40~60	4.0	4.5	4.8	5.1	5.4	5.9
60~80	4.4	4.6	4.8	5.2	5.7	8.2
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2729	$P'_{s,t}$	0.2703
$P_{C,s}$	0.5295	$P'_{C',s}$	0.5721
$P_{d,C}$	0.3023	$P'_{d,C'}$	0.2519
$P_{e,d}$	0.2382	$P'_{e,d}$	0.2360
$P_{g,F}$	0.5504	$P'_{g,F'}$	0.4883
$P_{i,h}$	0.7904	$P'_{i,h}$	0.7830

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0161	$\Delta P_{C,s}$	0.0073
$\Delta P_{F,e}$	-0.0024	$\Delta P_{g,F}$	-0.0085

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	656
$T_g(^{\circ}\text{C})$	695
$T_{10}^{14.5}(^{\circ}\text{C})$	603
$T_{10}^{13}(^{\circ}\text{C})$	634
$T_{10}^{7.6}(^{\circ}\text{C})$	742
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	62
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	74
$\lambda(\text{W}/\text{m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	672
F_A	110
$E(10^7\text{Pa})$	11471
$G(10^7\text{Pa})$	4589
μ	0.25
$B(10^{-12}/\text{Pa})$	1.59

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.820	0.670
2200	0.951	0.905
2000	0.983	0.966
1800	0.996	0.992
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	0.998	0.997
700	0.997	0.995
650	0.997	0.995
600	0.997	0.995
550	0.997	0.994
500	0.994	0.988
480	0.991	0.983
460	0.988	0.977
440	0.985	0.971
420	0.982	0.965
400	0.977	0.954
390	0.971	0.942
380	0.959	0.920
370	0.939	0.881
360	0.900	0.810
350	0.840	0.700
340	0.720	0.520
330	0.510	0.260
320	0.220	0.050
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	380/320
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	4.08

退火增值系数 ECFA.	
β	150

备注 Remarks	

H-LaK4S	640602	$n_d=1.64000$	$v_d=60.20$	$n_F-n_C=0.01063$
		$n_e=1.64254$	$v_e=60.01$	$n_F-n_{C'}=0.01071$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.60364
$n_{1970.1}$	1970.1	1.61125
$n_{1529.6}$	1529.6	1.61911
$n_{1060.0}$	1060.0	1.62671
n_t	1014.0	1.62752
n_s	852.1	1.62752
n_r	706.5	1.63486
n_C	656.3	1.63674
$n_{C'}$	643.9	1.63726
$n_{\text{He-Ne}}$	632.8	1.63775
n_D	589.3	1.63991
n_d	587.6	1.64000
n_e	546.1	1.64254
n_F	486.1	1.64737
$n_{F'}$	480.0	1.64797
n_g	435.8	1.65308
n_h	404.7	1.65780
n_i	365.0	1.66582
$n_{313.2}$	313.2	1.68204
$n_{302.2}$	302.2	1.68683

色散公式常数 Constants of Dispersion Formula	
K_1	4.02312889E-001
L_1	-2.67679247E-003
K_2	1.24575177E+000
L_2	1.31716110E-002
K_3	1.28904431E+000
L_3	9.33654804E+001

折射率温度系数常数 Constants of dn/dt	
D_0	1.06E-06
D_1	1.84E-08
D_2	-7.40E-11
E_0	2.79E-07
E_1	6.19E-10
$\lambda_{TK}(\mu\text{m})$	2.75E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^\circ\text{C}$)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	1.4	1.8	1.9	2.0	2.2	2.7
-20~0	2.0	2.2	2.3	2.4	2.4	3.1
0~20	2.1	2.2	2.4	2.7	2.9	3.2
20~40	2.2	2.5	2.6	2.7	3.3	3.7
40~60	2.3	2.8	3.0	3.1	3.4	3.7
60~80	2.5	2.9	3.0	3.1	3.4	3.8
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.3079	$P'_{s,t}$	0.3057
$P_{C,s}$	0.5586	$P'_{C',s}$	0.6035
$P_{d,C}$	0.3070	$P'_{d,C'}$	0.2560
$P_{e,d}$	0.2385	$P'_{e,d}$	0.2368
$P_{g,F}$	0.5372	$P'_{g,F'}$	0.4773
$P_{i,h}$	0.7546	$P'_{i,h}$	0.7492

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0366	$\Delta P_{C,s}$	0.0146
$\Delta P_{F,e}$	-0.0024	$\Delta P_{g,F}$	-0.0060

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	666
$T_S(^{\circ}\text{C})$	686
$T_{10}^{14.5}(^{\circ}\text{C})$	610
$T_{10}^{13}(^{\circ}\text{C})$	639
$T_{10}^{7.6}(^{\circ}\text{C})$	735
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	63
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	78
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	4
D_A	4
CR	3
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	634
F_A	129
$E(10^7\text{Pa})$	10903
$G(10^7\text{Pa})$	4236
μ	0.287
$B(10^{-12}/\text{Pa})$	1.99

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau_{5\text{mm}}$	$\tau_{10\text{mm}}$
2400	0.760	0.580
2200	0.918	0.842
2000	0.975	0.951
1800	0.990	0.980
1600	0.995	0.991
1400	0.998	0.996
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
700	0.998	0.997
650	0.998	0.997
600	0.998	0.997
550	0.998	0.996
500	0.997	0.995
480	0.997	0.994
460	0.995	0.991
440	0.994	0.988
420	0.992	0.984
400	0.987	0.974
390	0.981	0.963
380	0.971	0.943
370	0.953	0.908
360	0.920	0.847
350	0.870	0.760
340	0.790	0.630
330	0.690	0.470
320	0.560	0.310
310	0.420	0.170
300	0.290	0.080
290	0.190	0.040
280	0.120	0.010

着色度 Color Code	
λ_{80}/λ_{5}	355/275
λ_{70}/λ_{5}	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	2.99

退火增值系数 ECFA.	
β	130

备注 Remarks	

H-LaK5S	678555	n _d = 1.67790	v _d = 55.52	n _F -n _C = 0.01221
		n _e = 1.68081	v _e = 55.26	n _F '-n _C '= 0.01232

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.64381
n _{1970.1}	1970.1	1.65003
n _{1529.6}	1529.6	1.65662
n _{1060.0}	1060.0	1.66353
n _t	1014.0	1.66433
n _s	852.1	1.66433
n _r	706.5	1.67209
n _C	656.3	1.67420
n _{C'}	643.9	1.67479
n _{He-Ne}	632.8	1.67534
n _D	589.3	1.67779
n _d	587.6	1.67790
n _e	546.1	1.68081
n _F	486.1	1.68641
n _{F'}	480.0	1.68711
n _g	435.8	1.69308
n _h	404.7	1.69863
n _i	365.0	1.70812
n _{313.2}	313.2	1.72757
n _{302.2}	302.2	1.73338

色散公式常数 Constants of Dispersion Formula	
K ₁	1.54437415E+000
L ₁	8.15901025E-003
K ₂	1.00066972E+000
L ₂	8.89110754E+001
K ₃	2.19123775E-001
L ₃	2.67011064E-002

折射率温度系数常数 Constants of dn/dt	
D ₀	-4.10E-06
D ₁	1.07E-08
D ₂	-1.69E-11
E ₀	5.87E-07
E ₁	1.27E-09
λ _{TK} (μm)	9.50E-02

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	-0.4	0.0	0.2	0.0	0.7	0.8
-40~-20	-0.1	0.1	0.2	0.3	0.4	0.8
-20~0	-0.5	0.0	0.0	0.2	0.6	0.9
0~20	-0.1	0.0	0.1	0.5	0.7	1.2
20~40	-0.2	0.3	0.5	0.7	1.1	1.6
40~60	-0.6	0.1	0.2	0.4	0.8	1.2
60~80	-0.3	0.4	0.6	0.8	1.1	1.6
80~100	-0.1	0.7	0.8	0.9	1.3	1.8
100~120	0.1	0.7	0.9	1.0	1.5	1.9
120~140	0.3	0.7	0.9	1.2	1.6	1.9

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2750	P' _{s,t}	0.2726
P _{C,s}	0.5331	P' _{C',s}	0.5762
P _{d,C}	0.3033	P' _{d,C'}	0.2528
P _{e,d}	0.2384	P' _{e,d}	0.2363
P _{g,F}	0.5462	P' _{g,F'}	0.4847
P _{ih}	0.7771	P' _{ih}	0.7702

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0003	ΔP _{C,s}	0.0001
ΔP _{F,e}	-0.0011	ΔP _{g,F}	-0.0049

热性质 Thermal Properties	
T _g (℃)	646
T _g '(℃)	669
T ₁₀ ^{14.5} (℃)	616
T ₁₀ ¹³ (℃)	632
T ₁₀ ^{7.6} (℃)	722
α _{-30/70℃} (10 ⁻⁷ /K)	83
α _{100/300℃} (10 ⁻⁷ /K)	94
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	3
D _A	6
CR	2
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	576
F _A	174
E(10 ⁷ Pa)	9561
G(10 ⁷ Pa)	3705
μ	0.29
B(10 ⁻¹² /Pa)	1.57

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.855	0.731
2200	0.956	0.914
2000	0.984	0.969
1800	0.993	0.987
1600	0.997	0.995
1400	0.998	0.996
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	0.998	0.996
700	0.998	0.996
650	0.998	0.996
600	0.997	0.995
550	0.997	0.994
500	0.996	0.993
480	0.995	0.991
460	0.993	0.987
440	0.991	0.983
420	0.990	0.981
400	0.988	0.976
390	0.984	0.969
380	0.977	0.955
370	0.963	0.928
360	0.939	0.882
350	0.898	0.807
340	0.835	0.697
330	0.741	0.549
320	0.618	0.382
310	0.469	0.220
300	0.302	0.091
290	0.158	0.025
280		

着色度 Color Code	
λ ₈₀ /λ ₅	360/295
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	3.80

退火增值系数 ECFA.	
β	120

备注 Remarks	

H-LaK6S	694534	n _d = 1.69350	v _d = 53.38	n _F -n _C = 0.01299
		n _e = 1.69660	v _e = 53.15	n _F -n _{C'} = 0.01311

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.65439
n _{1970.1}	1970.1	1.66200
n _{1529.6}	1529.6	1.66994
n _{1060.0}	1060.0	1.67794
n _t	1014.0	1.67884
n _s	852.1	1.67884
n _r	706.5	1.68730
n _C	656.3	1.68955
n _{C'}	643.9	1.69018
n _{He-Ne}	632.8	1.69077
n _D	589.3	1.69338
n _d	587.6	1.69350
n _e	546.1	1.69660
n _F	486.1	1.70254
n _{F'}	480.0	1.70329
n _g	435.8	1.70965
n _h	404.7	1.71557
n _i	365.0	1.72576
n _{313.2}	313.2	1.74690
n _{302.2}	302.2	1.75330

色散公式常数 Constants of Dispersion Formula	
K ₁	1.13018444E+000
L ₁	8.14541493E+001
K ₂	1.60589000E+000
L ₂	8.17222723E-003
K ₃	2.07868982E-001
L ₃	3.03803140E-002

折射率温度系数常数 Constants of dn/dt	
D ₀	3.08E-06
D ₁	1.57E-08
D ₂	-1.21E-11
E ₀	5.18E-07
E ₁	5.95E-10
λ _{TK} (μm)	1.82E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	3.3	3.8	4.0	4.1	4.4	4.8
-40~-20	3.3	3.8	4.0	4.1	4.5	5.0
-20~0	3.4	3.8	4.0	4.1	4.5	5.0
0~20	3.4	3.9	4.0	4.3	4.6	5.0
20~40	3.6	4.1	4.2	4.4	4.8	5.2
40~60	3.8	4.3	4.5	4.6	5.2	5.6
60~80	4.0	4.6	4.7	4.9	5.5	6.0
80~100	4.0	4.7	4.9	5.1	5.5	6.1
100~120	4.2	4.9	5.3	5.5	5.8	6.4
120~140	4.4	4.9	5.4	5.6	5.8	6.5

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2849	P' _{s,t}	0.2825
P _{C,s}	0.5395	P' _{C',s}	0.5828
P _{d,C}	0.3039	P' _{d,C'}	0.2533
P _{e,d}	0.2383	P' _{e,d}	0.2362
P _{g,F}	0.5466	P' _{g,F'}	0.4853
P _{i,h}	0.7839	P' _{i,h}	0.7772

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0267	ΔP _{C,s}	0.0115
ΔP _{F,e}	-0.0027	ΔP _{g,F}	-0.0082

热性质 Thermal Properties	
T _g (℃)	638
T _g (℃)	673
T ₁₀ ^{14.5} (℃)	600
T ₁₀ ¹³ (℃)	626
T ₁₀ ^{7.6} (℃)	724
α _{-30/70℃} (10 ⁻⁷ /K)	60
α _{100/300℃} (10 ⁻⁷ /K)	73
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	2
D _A	6
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	683
F _A	113
E(10 ⁷ Pa)	10770
G(10 ⁷ Pa)	4206
μ	0.28
B(10 ⁻¹² /Pa)	2.01

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.770	0.590
2200	0.923	0.853
2000	0.976	0.953
1800	0.992	0.984
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
700	0.999	0.998
650	0.999	0.998
600	0.999	0.998
550	0.998	0.997
500	0.997	0.994
480	0.996	0.993
460	0.995	0.990
440	0.993	0.987
420	0.991	0.983
400	0.988	0.976
390	0.983	0.967
380	0.975	0.951
370	0.960	0.922
360	0.929	0.863
350	0.870	0.760
340	0.730	0.540
330	0.470	0.220
320	0.140	0.020
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	365/320
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	3.59

退火增值系数 ECFA.	
β	145

备注 Remarks	

H-LaK7B	713539	n _d = 1.71300	v _d = 53.94	n _F -n _C = 0.01322
		n _e = 1.71615	v _e = 53.72	n _F '-n _C '= 0.01333

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.67450
n _{1970.1}	1970.1	1.68160
n _{1529.6}	1529.6	1.68930
n _{1060.0}	1060.0	1.69728
n _t	1014.0	1.69818
n _s	852.1	1.70190
n _r	706.5	1.70670
n _C	656.3	1.70898
n _{C'}	643.9	1.70962
n _{He-Ne}	632.8	1.71021
n _D	589.3	1.71287
n _d	587.6	1.71287
n _e	546.1	1.71615
n _F	486.1	1.72220
n _{F'}	480.0	1.72295
n _g	435.8	1.72943
n _h	404.7	1.73545
n _i	365.0	1.74574
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
A ₀	2.87989018E+000
A ₁	-1.46958687E-002
A ₂	1.89956868E-002
A ₃	6.06495285E-004
A ₄	-2.91346717E-005
A ₅	1.65584289E-006

折射率温度系数常数 Constants of dn/dt	
D ₀	3.18E-06
D ₁	1.31E-08
D ₂	-1.47E-11
E ₀	5.57E-07
E ₁	3.42E-10
λ _{TK} (μm)	1.46E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	3.6	4.1	4.2	4.3	4.7	5.1
-40~-20	3.6	4.0	4.3	4.3	4.9	5.2
-20~0	3.7	4.1	4.3	4.5	4.9	5.3
0~20	3.7	4.1	4.4	4.5	5.1	5.4
20~40	3.7	4.1	4.4	4.6	5.1	5.5
40~60	3.7	4.2	4.5	4.7	5.2	5.6
60~80	3.8	4.3	4.7	4.9	5.3	5.7
80~100	3.9	4.5	5.1	5.0	5.4	5.8
100~120	4.1	4.7	5.3	5.3	5.4	6.0
120~140	4.2	4.8	5.4	5.4	5.6	6.2

相对部分色散 Relative Partial Dispersions			
P _{s,t}		P' _{s,t}	
P _{C,s}		P' _{C',s}	
P _{d,C}	0.3041	P' _{d,C'}	0.2535
P _{e,d}	0.2383	P' _{e,d}	0.2363
P _{g,F}	0.5469	P' _{g,F'}	0.4860
P _{i,h}		P' _{i,h}	

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0155	ΔP _{C,s}	0.0057
ΔP _{F,e}	-0.0028	ΔP _{g,F}	-0.0071

热性质 Thermal Properties	
T _g (℃)	627
T _g '(℃)	662
T ₁₀ ^{14.5} (℃)	573
T ₁₀ ¹³ (℃)	619
T ₁₀ ^{7.6} (℃)	
α _{-30/70℃} (10 ⁻⁷ /K)	63
α _{100/300℃} (10 ⁻⁷ /K)	77
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	3
CR	
RC(S)	1
RA(S)	2

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	626
F _A	76
E(10 ⁷ Pa)	11590
G(10 ⁷ Pa)	4490
μ	0.291
B(10 ⁻¹² /Pa)	1.67

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.774	0.600
2200	0.924	0.854
2000	0.986	0.972
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
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	0.998	0.996
440	0.997	0.993
420	0.995	0.990
400	0.993	0.984
390	0.990	0.977
380	0.987	0.964
370	0.975	0.939
360	0.950	0.899
350	0.914	0.833
340	0.860	0.738
330	0.785	0.614
320	0.687	0.473
310	0.577	0.334
300	0.464	0.217
290	0.355	0.128
280	0.248	0.063

着色度 Color Code	
λ ₈₀ /λ ₅	365/270
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	3.78

退火增值系数 ECFA.	
β	145

备注 Remarks	

H-LaK8S	720503	$n_d=1.72000$	$v_d=50.34$	$n_F-n_C=0.01430$
		$n_e=1.72341$	$v_e=50.11$	$n_F-n_C=0.01444$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.67897
$n_{1970.1}$	1970.1	1.68671
$n_{1529.6}$	1529.6	1.69483
$n_{1060.0}$	1060.0	1.70316
n_t	1014.0	1.70411
n_s	852.1	1.70411
n_r	706.5	1.71322
n_C	656.3	1.71567
$n_{C'}$	643.9	1.71636
$n_{\text{He-Ne}}$	632.8	1.71700
n_D	589.3	1.71987
n_d	587.6	1.72000
n_e	546.1	1.72341
n_F	486.1	1.72998
$n_{F'}$	480.0	1.73080
n_g	435.8	1.73786
n_h	404.7	1.74448
n_i	365.0	1.75593
$n_{313.2}$	313.2	1.78010
$n_{302.2}$	302.2	1.78756

色散公式常数 Constants of Dispersion Formula	
K_1	1.13861881E+000
L_1	8.00744660E+001
K_2	1.58050538E-001
L_2	3.68197669E-002
K_3	1.73934635E+000
L_3	9.09531981E-003

折射率温度系数常数 Constants of dn/dt	
D_0	4.02E-06
D_1	1.82E-08
D_2	-1.04E-10
E_0	4.87E-07
E_1	9.07E-10
$\lambda_{TK}(\mu\text{m})$	2.16E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	3.1	3.6	3.8	4.0	4.4	4.7
-20~0	3.9	4.2	4.4	4.7	5.1	5.5
0~20	4.1	4.2	4.3	4.9	5.3	5.8
20~40	4.2	4.7	5.0	5.2	5.7	6.0
40~60	4.2	5.0	5.0	5.2	5.8	6.4
60~80	4.3	5.1	5.2	5.2	5.9	6.5
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2767	$P'_{s,t}$	0.2742
$P_{C,s}$	0.5320	$P'_{C',s}$	0.5747
$P_{d,C}$	0.3025	$P'_{d,C'}$	0.2520
$P_{e,d}$	0.2381	$P'_{e,d}$	0.2359
$P_{g,F}$	0.5514	$P'_{g,F'}$	0.4893
$P_{i,h}$	0.8007	$P'_{i,h}$	0.7932

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0253	$\Delta P_{C,s}$	0.0113
$\Delta P_{F,e}$	-0.0027	$\Delta P_{g,F}$	-0.0086

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	632
$T_g(^{\circ}\text{C})$	667
$T_{10}^{14.5}(^{\circ}\text{C})$	591
$T_{10}^{13}(^{\circ}\text{C})$	626
$T_{10}^{7.6}(^{\circ}\text{C})$	721
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	59
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	72
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	607
F_A	105
$E(10^7\text{Pa})$	10941
$G(10^7\text{Pa})$	4233
μ	0.292
$B(10^{-12}/\text{Pa})$	1.92

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.780	0.610
2200	0.927	0.860
2000	0.978	0.957
1800	0.993	0.987
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	0.997	0.994
700	0.997	0.994
650	0.996	0.993
600	0.996	0.993
550	0.996	0.992
500	0.994	0.989
480	0.992	0.985
460	0.990	0.981
440	0.988	0.976
420	0.984	0.968
400	0.977	0.954
390	0.969	0.938
380	0.955	0.912
370	0.931	0.867
360	0.890	0.790
350	0.830	0.690
340	0.720	0.520
330	0.550	0.300
320	0.280	0.080
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	370/315
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.77

退火增值系数 ECFA.	
β	150

备注 Remarks	

H-LaK10S	651559	$n_d=1.65113$	$v_d=55.89$	$n_F-n_C=0.01165$
		$n_e=1.65391$	$v_e=55.62$	$n_F-n_C=0.01176$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.61940
$n_{1970.1}$	1970.1	1.62504
$n_{1529.6}$	1529.6	1.63108
$n_{1060.0}$	1060.0	1.63751
n_t	1014.0	1.63826
n_s	852.1	1.63826
n_r	706.5	1.64560
n_C	656.3	1.64760
$n_{C'}$	643.9	1.64816
$n_{\text{He-Ne}}$	632.8	1.64869
n_D	589.3	1.65103
n_d	587.6	1.65113
n_e	546.1	1.65391
n_F	486.1	1.65925
$n_{F'}$	480.0	1.65992
n_g	435.8	1.66563
n_h	404.7	1.67094
n_i	365.0	1.68002
$n_{313.2}$	313.2	1.69857
$n_{302.2}$	302.2	1.70409

色散公式常数 Constants of Dispersion Formula	
K_1	7.83174579E-001
L_1	2.73169490E-003
K_2	8.94315049E-001
L_2	1.69034325E-002
K_3	1.13896900E+000
L_3	1.11158589E+002

折射率温度系数常数 Constants of dn/dt	
D_0	-9.18E-07
D_1	1.25E-08
D_2	-2.28E-11
E_0	4.91E-07
E_1	6.43E-10
$\lambda_{TK}(\mu\text{m})$	1.89E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	1.4	1.7	1.9	2.0	2.3	2.6
-40~-20	1.2	1.6	1.7	1.9	2.4	2.6
-20~0	1.2	1.6	1.7	1.9	2.1	2.6
0~20	1.3	1.6	1.8	1.9	2.2	2.7
20~40	1.3	1.7	1.9	2.0	2.4	2.8
40~60	1.4	1.8	2.0	2.2	2.6	3.0
60~80	1.5	2.0	2.2	2.4	2.9	3.2
80~100	1.6	2.1	2.3	2.6	3.0	3.3
100~120	1.6	2.1	2.3	2.6	3.0	3.4
120~140	1.5	2.1	2.4	2.5	2.9	3.3

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2718	$P'_{s,t}$	0.2693
$P_{C,s}$	0.5302	$P'_{C',s}$	0.5730
$P_{d,C}$	0.3028	$P'_{d,C'}$	0.2524
$P_{e,d}$	0.2384	$P'_{e,d}$	0.2362
$P_{g,F}$	0.5475	$P'_{g,F'}$	0.4858
$P_{i,h}$	0.7792	$P'_{i,h}$	0.7721

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	-0.0076	$\Delta P_{C,s}$	-0.0037
$\Delta P_{F,e}$	-0.0004	$\Delta P_{g,F}$	-0.0030

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	618
$T_S(^{\circ}\text{C})$	668
$T_{10}^{14.5}(^{\circ}\text{C})$	575
$T_{10}^{13}(^{\circ}\text{C})$	607
$T_{10}^{7.6}(^{\circ}\text{C})$	721
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	75
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	84
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	6
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	634
F_A	162
$E(10^7\text{Pa})$	9309
$G(10^7\text{Pa})$	3659
μ	0.272
$B(10^{-12}/\text{Pa})$	1.74

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.888	0.789
2200	0.950	0.903
2000	0.983	0.967
1800	0.992	0.984
1600	0.997	0.994
1400	0.997	0.994
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
700	0.999	0.998
650	0.999	0.998
600	0.998	0.997
550	0.997	0.995
500	0.997	0.994
480	0.997	0.994
460	0.997	0.994
440	0.997	0.994
420	0.997	0.994
400	0.996	0.993
390	0.995	0.990
380	0.992	0.985
370	0.986	0.972
360	0.976	0.952
350	0.954	0.911
340	0.920	0.847
330	0.863	0.744
320	0.775	0.600
310	0.650	0.422
300	0.493	0.243
290	0.327	0.107
280	0.210	0.044

着色度 Color Code	
λ_{80}/λ_5	350/285
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.73

退火增值系数 ECFA.	
β	120

备注 Remarks	

H-LaK11S	665546	n _d = 1.66461	v _d = 54.61	n _F -n _C = 0.01217
		n _e = 1.66751	v _e = 54.33	n _F '-n _C '= 0.01229

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.63249
n _{1970.1}	1970.1	1.63808
n _{1529.6}	1529.6	1.64407
n _{1060.0}	1060.0	1.65053
n _t	1014.0	1.65129
n _s	852.1	1.65129
n _r	706.5	1.65886
n _C	656.3	1.66093
n _{C'}	643.9	1.66152
n _{He-Ne}	632.8	1.66206
n _D	589.3	1.66450
n _d	587.6	1.66461
n _e	546.1	1.66751
n _F	486.1	1.67310
n _{F'}	480.0	1.67380
n _g	435.8	1.67980
n _h	404.7	1.68539
n _i	365.0	1.69498
n _{313.2}	313.2	1.71471
n _{302.2}	302.2	1.72062

色散公式常数 Constants of Dispersion Formula	
K ₁	1.09089534E+000
L ₁	4.92618902E-003
K ₂	6.28435989E-001
L ₂	2.03181412E-002
K ₃	1.01438282E+000
L ₃	1.00530943E+002

折射率温度系数常数 Constants of dn/dt	
D ₀	-1.34E-06
D ₁	2.38E-08
D ₂	-5.50E-11
E ₀	4.75E-07
E ₁	6.18E-11
λ _{TK} (μm)	2.28E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	0.4	0.6	1.1	1.4	2.1	2.4
-20~0	0.6	1.1	1.3	1.5	1.9	2.2
0~20	0.8	1.2	1.4	1.7	1.9	2.2
20~40	1.4	1.8	1.9	2.3	2.6	3.1
40~60	1.6	1.8	2.0	2.3	2.7	3.2
60~80	1.6	1.8	2.0	2.2	2.7	3.2
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2666	P' _{s,t}	0.2640
P _{C,s}	0.5256	P' _{C',s}	0.5680
P _{d,C}	0.3021	P' _{d,C'}	0.2517
P _{e,d}	0.2383	P' _{e,d}	0.2360
P _{g,F}	0.5502	P' _{g,F'}	0.4880
P _{i,h}	0.7878	P' _{i,h}	0.7803

异常色散 Abnormal Dispersions			
ΔP _{C,t}	-0.0115	ΔP _{C,s}	-0.0053
ΔP _{F,e}	-0.0002	ΔP _{g,F}	-0.0025

热性质 Thermal Properties	
T _g (℃)	621
T _g (℃)	645
T ₁₀ ^{14.5} (℃)	578
T ₁₀ ¹³ (℃)	608
T ₁₀ ^{7.6} (℃)	708
α _{30/70℃} (10 ⁻⁷ /K)	76
α _{100/300℃} (10 ⁻⁷ /K)	88
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	6
CR	3
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	517
F _A	175
E(10 ⁷ Pa)	8434
G(10 ⁷ Pa)	3267
μ	0.291
B(10 ⁻¹² /Pa)	1.93

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.880	0.780
2200	0.961	0.923
2000	0.986	0.973
1800	0.995	0.990
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	0.998	0.997
700	0.998	0.997
650	0.997	0.994
600	0.996	0.993
550	0.996	0.993
500	0.996	0.993
480	0.995	0.990
460	0.993	0.987
440	0.992	0.984
420	0.991	0.983
400	0.990	0.980
390	0.987	0.975
380	0.983	0.966
370	0.975	0.950
360	0.959	0.919
350	0.936	0.876
340	0.897	0.805
330	0.840	0.700
320	0.750	0.560
310	0.600	0.360
300	0.370	0.140
290	0.110	0.010
280		

着色度 Color Code	
λ ₈₀ /λ ₅	360/300
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.02

退火增值系数 ECFA.	
β	105

备注 Remarks	

H-LaK12S	697562	$n_d=1.69680$	$v_d=56.18$	$n_F-n_C=0.01240$
		$n_e=1.69976$	$v_e=55.95$	$n_F-n_C=0.01251$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.65832
$n_{1970.1}$	1970.1	1.66593
$n_{1529.6}$	1529.6	1.67386
$n_{1060.0}$	1060.0	1.68178
n_t	1014.0	1.68266
n_s	852.1	1.68266
n_r	706.5	1.69086
n_C	656.3	1.69302
$n_{C'}$	643.9	1.69362
$n_{\text{He-Ne}}$	632.8	1.69419
n_D	589.3	1.69669
n_d	587.6	1.69680
n_e	546.1	1.69976
n_F	486.1	1.70542
$n_{F'}$	480.0	1.70613
n_g	435.8	1.71216
n_h	404.7	1.71775
n_i	365.0	1.72730
$n_{313.2}$	313.2	1.74676
$n_{302.2}$	302.2	1.75255

色散公式常数 Constants of Dispersion Formula	
K_1	7.86703112E-001
L_1	2.02073208E-003
K_2	1.21770392E+000
L_2	8.67034790E+001
K_3	1.04086924E+000
L_3	1.63643393E-002

折射率温度系数常数 Constants of dn/dt	
D_0	-1.86E-07
D_1	1.39E-08
D_2	-1.79E-11
E_0	4.74E-07
E_1	4.36E-10
$\lambda_{\text{TK}}(\mu\text{m})$	1.67E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	1.5	1.9	2.1	2.2	2.6	2.8
-40~-20	1.5	2.0	2.1	2.3	2.6	2.9
-20~0	1.7	2.0	2.2	2.3	2.6	3.0
0~20	1.7	2.1	2.3	2.4	2.7	3.1
20~40	1.7	2.2	2.4	2.5	2.8	3.2
40~60	1.8	2.3	2.5	2.7	3.0	3.4
60~80	2.0	2.5	2.7	2.9	3.2	3.6
80~100	2.2	2.7	2.8	3.0	3.4	3.8
100~120	2.3	2.7	2.9	3.1	3.5	4.0
120~140	2.3	2.8	3.1	3.3	3.5	4.1

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2905	$P'_{s,t}$	0.2881
$P_{C,s}$	0.5447	$P'_{C',s}$	0.5884
$P_{d,C}$	0.3048	$P'_{d,C'}$	0.2541
$P_{e,d}$	0.2384	$P'_{e,d}$	0.2364
$P_{g,F}$	0.5429	$P'_{g,F'}$	0.4821
$P_{i,h}$	0.7696	$P'_{i,h}$	0.7633

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0242	$\Delta P_{C,s}$	0.0101
$\Delta P_{F,e}$	-0.0022	$\Delta P_{g,F}$	-0.0071

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	662
$T_g(^{\circ}\text{C})$	684
$T_{10}^{14.5}(^{\circ}\text{C})$	631
$T_{10}^{13}(^{\circ}\text{C})$	658
$T_{10}^{7.6}(^{\circ}\text{C})$	732
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	64
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	80
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	3
CR	1
RC(S)	1
RA(S)	6

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	686
F_A	118
$E(10^7\text{Pa})$	10851
$G(10^7\text{Pa})$	4337
μ	0.251
$B(10^{-12}/\text{Pa})$	1.62

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.787	0.619
2200	0.944	0.890
2000	0.981	0.961
1800	0.993	0.987
1600	0.998	0.995
1400	0.998	0.996
1200	0.999	0.998
1060	0.999	0.998
1000	0.999	0.998
950	0.999	0.997
900	0.999	0.997
850	0.998	0.996
800	0.998	0.996
700	0.998	0.996
650	0.997	0.995
600	0.997	0.994
550	0.997	0.994
500	0.997	0.994
480	0.996	0.992
460	0.994	0.989
440	0.992	0.985
420	0.990	0.981
400	0.987	0.975
390	0.983	0.967
380	0.976	0.953
370	0.963	0.927
360	0.940	0.884
350	0.902	0.813
340	0.845	0.714
330	0.766	0.586
320	0.662	0.438
310	0.533	0.284
300	0.379	0.144
290	0.202	0.041
280		

着色度 Color Code	
λ_{80}/λ_5	365/295
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.71

退火增值系数 ECFA.	
β	135

备注 Remarks	

H-LaK50S	652584	n _d = 1.65160	v _d = 58.40	n _F -n _C = 0.01116
		n _e = 1.65426	v _e = 58.17	n _F '-n _C '= 0.01125

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.61634
n _{1970.1}	1970.1	1.62338
n _{1529.6}	1529.6	1.63071
n _{1060.0}	1060.0	1.63800
n _t	1014.0	1.63880
n _s	852.1	1.63880
n _r	706.5	1.64624
n _C	656.3	1.64819
n _{C'}	643.9	1.64874
n _{He-Ne}	632.8	1.64924
n _D	589.3	1.65150
n _d	587.6	1.65160
n _e	546.1	1.65426
n _F	486.1	1.65935
n _{F'}	480.0	1.65998
n _g	435.8	1.66539
n _h	404.7	1.67040
n _i	365.0	1.67893
n _{313.2}	313.2	1.69627
n _{302.2}	302.2	1.70141

色散公式常数 Constants of Dispersion Formula	
K ₁	7.59437631E-001
L ₁	2.23196710E-003
K ₂	1.16056755E+000
L ₂	9.10466256E+001
K ₃	9.23360830E-001
L ₃	1.58590987E-002

折射率温度系数常数 Constants of dn/dt	
D ₀	5.60E-07
D ₁	1.06E-08
D ₂	-4.91E-11
E ₀	3.57E-07
E ₁	6.22E-10
λ _{TK} (μm)	2.45E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	1.3	1.5	2.1	2.3	2.5	2.8
-20~0	2.0	2.6	2.7	2.8	3.0	3.3
0~20	2.0	2.3	2.6	2.7	2.8	3.2
20~40	2.0	2.2	2.5	2.6	2.9	3.3
40~60	2.1	2.4	2.5	2.6	2.8	3.5
60~80	2.2	2.3	2.4	2.9	3.7	3.9
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2942	P' _{s,t}	0.2918
P _{C,s}	0.5477	P' _{C',s}	0.5917
P _{d,C}	0.3055	P' _{d,C'}	0.2546
P _{e,d}	0.2385	P' _{e,d}	0.2366
P _{g,F}	0.5413	P' _{g,F'}	0.4806
P _{i,h}	0.7646	P' _{i,h}	0.7585

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0204	ΔP _{C,s}	0.0079
ΔP _{F,e}	-0.0018	ΔP _{g,F}	-0.0050

热性质 Thermal Properties	
T _g (℃)	594
T _g (℃)	633
T ₁₀ ^{14.5} (℃)	554
T ₁₀ ¹³ (℃)	585
T ₁₀ ^{7.6} (℃)	688
α _{-30/70℃} (10 ⁻⁷ /K)	68
α _{100/300℃} (10 ⁻⁷ /K)	82
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	3
D _A	6
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	618
F _A	135
E(10 ⁷ Pa)	10142
G(10 ⁷ Pa)	4011
μ	0.264
B(10 ⁻¹² /Pa)	1.86

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.817	0.668
2200	0.943	0.889
2000	0.982	0.964
1800	0.993	0.985
1600	0.997	0.994
1400	0.996	0.993
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	0.997
800	0.998	0.996
700	0.998	0.996
650	0.998	0.996
600	0.997	0.995
550	0.997	0.994
500	0.997	0.994
480	0.996	0.992
460	0.994	0.989
440	0.993	0.986
420	0.991	0.983
400	0.989	0.979
390	0.986	0.972
380	0.979	0.959
370	0.969	0.938
360	0.948	0.899
350	0.913	0.833
340	0.852	0.726
330	0.764	0.584
320	0.640	0.409
310	0.488	0.238
300	0.319	0.102
290	0.167	0.028
280		

着色度 Color Code	
λ ₈₀ /λ ₅	350/290
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	3.48

退火增值系数 ECFA.	
β	130

备注 Remarks	

H-LaK51S	697555	n _d = 1.69680	v _d = 55.53	n _F -n _C = 0.01255
		n _e = 1.69979	v _e = 55.30	n _F -n _{C'} = 0.01266

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.65847
n _{1970.1}	1970.1	1.66596
n _{1529.6}	1529.6	1.67380
n _{1060.0}	1060.0	1.68168
n _t	1014.0	1.68256
n _s	852.1	1.68256
n _r	706.5	1.69080
n _C	656.3	1.69298
n _{C'}	643.9	1.69359
n _{He-Ne}	632.8	1.69416
n _D	589.3	1.69669
n _d	587.6	1.69680
n _e	546.1	1.69979
n _F	486.1	1.70553
n _{F'}	480.0	1.70624
n _g	435.8	1.71236
n _h	404.7	1.71804
n _i	365.0	1.72774
n _{313.2}	313.2	1.74755
n _{302.2}	302.2	1.75344

色散公式常数 Constants of Dispersion Formula	
K ₁	6.39398694E-001
L ₁	5.67124825E-005
K ₂	1.18748481E+000
L ₂	1.58001968E-002
K ₃	1.26545352E+000
L ₃	9.10970530E+001

折射率温度系数常数 Constants of dn/dt	
D ₀	8.08E-08
D ₁	1.25E-08
D ₂	-7.70E-12
E ₀	4.99E-07
E ₁	6.10E-10
λ _{TK} (μm)	1.61E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	1.6	2.0	2.0	2.3	2.6	2.8
-40~-20	1.9	2.0	2.3	2.4	2.8	3.1
-20~0	1.9	2.2	2.5	2.6	3.0	3.4
0~20	2.0	2.4	2.6	3.0	3.0	3.4
20~40	1.8	2.4	2.5	2.7	3.1	3.5
40~60	1.9	2.5	2.8	2.7	3.2	3.5
60~80	2.2	2.6	2.8	3.1	3.3	3.8
80~100	2.4	2.8	2.9	3.2	3.6	4.1
100~120	2.5	3.1	3.2	3.4	3.9	4.4
120~140	2.6	3.2	3.4	3.7	4.0	4.6

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2880	P' _{s,t}	0.2856
P _{C,s}	0.5423	P' _{C',s}	0.5859
P _{d,C}	0.3045	P' _{d,C'}	0.2538
P _{e,d}	0.2383	P' _{e,d}	0.2363
P _{g,F}	0.5442	P' _{g,F'}	0.4831
P _{i,h}	0.7730	P' _{i,h}	0.7666

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0224	ΔP _{C,s}	0.0093
ΔP _{F,e}	-0.0022	ΔP _{g,F}	-0.0070

热性质 Thermal Properties	
T _g (℃)	654
T _S (℃)	682
T ₁₀ ^{14.5} (℃)	616
T ₁₀ ¹³ (℃)	640
T ₁₀ ^{7.6} (℃)	724
α _{-30/70℃} (10 ⁻⁷ /K)	68
α _{100/300℃} (10 ⁻⁷ /K)	81
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	695
F _A	111
E(10 ⁷ Pa)	11314
G(10 ⁷ Pa)	4428
μ	0.278
B(10 ⁻¹² /Pa)	1.69

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.796	0.633
2200	0.945	0.892
2000	0.981	0.963
1800	0.993	0.987
1600	0.998	0.995
1400	0.998	0.996
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	0.996	0.993
700	0.996	0.993
650	0.997	0.995
600	0.997	0.995
550	0.997	0.995
500	0.997	0.994
480	0.997	0.994
460	0.995	0.990
440	0.993	0.987
420	0.992	0.985
400	0.990	0.980
390	0.987	0.975
380	0.983	0.966
370	0.972	0.945
360	0.956	0.913
350	0.928	0.861
340	0.883	0.780
330	0.822	0.675
320	0.744	0.553
310	0.652	0.425
300	0.558	0.312
290	0.467	0.218
280	0.385	0.148

着色度 Color Code	
λ ₈₀ /λ ₅	365/275
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	3.61

退火增值系数 ECFA.	
β	140

备注 Remarks	

H-LaK52S	729547	$n_d=1.72916$	$v_d=54.68$	$n_F-n_C=0.01333$
		$n_e=1.73234$	$v_e=54.46$	$n_F-n_C'=0.01345$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.68923
$n_{1970.1}$	1970.1	1.69695
$n_{1529.6}$	1529.6	1.70502
$n_{1060.0}$	1060.0	1.71319
n_t	1014.0	1.71411
n_s	852.1	1.71411
n_r	706.5	1.72279
n_C	656.3	1.72511
$n_{C'}$	643.9	1.72575
$n_{\text{He-Ne}}$	632.8	1.72635
n_D	589.3	1.72904
n_d	587.6	1.72916
n_e	546.1	1.73234
n_F	486.1	1.73844
$n_{F'}$	480.0	1.73920
n_g	435.8	1.74570
n_h	404.7	1.75175
n_i	365.0	1.76207
$n_{313.2}$	313.2	1.78314
$n_{302.2}$	302.2	1.78940

色散公式常数 Constants of Dispersion Formula	
K_1	6.48528792E-001
L_1	1.65816179E-004
K_2	1.28450424E+000
L_2	1.58113883E-002
K_3	1.23774593E+000
L_3	8.57406109E+001

折射率温度系数常数 Constants of dn/dt	
D_0	6.32E-07
D_1	1.75E-08
D_2	-2.89E-11
E_0	5.00E-07
E_1	3.79E-10
$\lambda_{TK}(\mu\text{m})$	1.63E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^\circ\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	1.7	2.2	2.3	2.5	3.1	3.3
-40~-20	1.9	2.3	2.4	2.7	3.1	3.4
-20~0	2.1	2.3	2.5	2.7	3.1	3.4
0~20	2.2	2.5	2.7	2.8	3.2	3.6
20~40	2.3	2.7	2.9	3.0	3.5	3.9
40~60	2.4	3.0	3.3	3.4	3.7	4.4
60~80	2.7	3.3	3.5	3.7	3.9	4.6
80~100	2.9	3.4	3.6	3.8	4.2	4.6
100~120	2.9	3.6	3.8	3.9	4.3	4.6
120~140	3.0	3.7	3.9	4.0	4.5	4.7

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2847	$P'_{s,t}$	0.2823
$P_{C,s}$	0.5398	$P'_{C',s}$	0.5833
$P_{d,C}$	0.3041	$P'_{d,C'}$	0.2535
$P_{e,d}$	0.2383	$P'_{e,d}$	0.2363
$P_{g,F}$	0.5448	$P'_{g,F'}$	0.4836
$P_{i,h}$	0.7740	$P'_{i,h}$	0.7675

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0206	$\Delta P_{C,s}$	0.0088
$\Delta P_{F,e}$	-0.0023	$\Delta P_{g,F}$	-0.0078

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	673
$T_g(^{\circ}\text{C})$	696
$T_{10}^{14.5}(^{\circ}\text{C})$	630
$T_{10}^{13}(^{\circ}\text{C})$	654
$T_{10}^{7.6}(^{\circ}\text{C})$	
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	60
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	74
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	765
F_A	108
$E(10^7\text{Pa})$	11761
$G(10^7\text{Pa})$	4554
μ	0.291
$B(10^{-12}/\text{Pa})$	1.43

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.840	0.700
2200	0.948	0.898
2000	0.981	0.962
1800	0.992	0.985
1600	0.998	0.996
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
700	0.998	0.997
650	0.998	0.997
600	0.997	0.995
550	0.997	0.995
500	0.997	0.994
480	0.997	0.994
460	0.995	0.991
440	0.994	0.988
420	0.992	0.984
400	0.988	0.977
390	0.984	0.969
380	0.983	0.966
370	0.966	0.933
360	0.950	0.900
350	0.910	0.830
340	0.860	0.740
330	0.780	0.610
320	0.690	0.470
310	0.570	0.330
300	0.480	0.230
290	0.390	0.150
280	0.260	0.070

着色度 Color Code	
λ_{80}/λ_5	365/275
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	4.06

退火增值系数 ECFA.	
β	150

备注 Remarks	

H-LaK53S	755523	n _d = 1.75500	v _d = 52.32	n _F -n _C = 0.01443
		n _e = 1.75844	v _e = 52.09	n _F -n _{C'} = 0.01456

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.71385
n _{1970.1}	1970.1	1.72154
n _{1529.6}	1529.6	1.72963
n _{1060.0}	1060.0	1.73798
n _t	1014.0	1.73893
n _s	852.1	1.73893
n _r	706.5	1.74814
n _C	656.3	1.75063
n _{C'}	643.9	1.75132
n _{He-Ne}	632.8	1.75197
n _D	589.3	1.75487
n _d	587.6	1.75500
n _e	546.1	1.75844
n _F	486.1	1.76506
n _{F'}	480.0	1.76588
n _g	435.8	1.77296
n _h	404.7	1.77954
n _i	365.0	1.79082
n _{313.2}	313.2	1.81397
n _{302.2}	302.2	1.82089

色散公式常数 Constants of Dispersion Formula	
K ₁	1.03141220E+000
L ₁	3.95421648E-003
K ₂	9.85282193E-001
L ₂	1.86863118E-002
K ₃	1.17066017E+000
L ₃	8.11326753E+001

折射率温度系数常数 Constants of dn/dt	
D ₀	1.22E-06
D ₁	1.66E-08
D ₂	-2.94E-11
E ₀	5.17E-07
E ₁	4.19E-10
λ _{TK} (μm)	1.96E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	2.3	2.7	2.7	3.0	3.6	3.7
-40~-20	2.3	2.8	2.9	3.1	3.7	4.0
-20~0	2.3	3.0	3.1	3.3	3.7	4.1
0~20	2.4	3.0	3.2	3.3	3.7	4.3
20~40	2.6	3.3	3.4	3.7	4.0	4.5
40~60	2.8	3.5	3.6	4.0	4.4	5.0
60~80	3.1	3.6	3.9	4.1	4.7	5.1
80~100	3.4	3.7	4.0	4.3	4.8	5.3
100~120	3.4	3.8	4.2	4.3	4.9	5.3
120~140	3.5	4.0	4.3	4.5	5.0	5.5

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2769	P' _{s,t}	0.2744
P _{C,s}	0.5335	P' _{C',s}	0.5764
P _{d,C}	0.3031	P' _{d,C'}	0.2527
P _{e,d}	0.2383	P' _{e,d}	0.2362
P _{g,F}	0.5475	P' _{g,F'}	0.4859
P _{i,h}	0.7816	P' _{i,h}	0.7746

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0175	ΔP _{C,s}	0.0080
ΔP _{F,e}	-0.0025	ΔP _{g,F}	-0.0091

热性质 Thermal Properties	
T _g (℃)	669
T _S (℃)	707
T ₁₀ ^{14.5} (℃)	645
T ₁₀ ¹³ (℃)	671
T ₁₀ ^{7.6} (℃)	
α _{-30/70℃} (10 ⁻⁷ /K)	65
α _{100/300℃} (10 ⁻⁷ /K)	72
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	3
CR	1
RC(S)	1
RA(S)	2

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	692
F _A	93
E(10 ⁷ Pa)	12169
G(10 ⁷ Pa)	4701
μ	0.294
B(10 ⁻¹² /Pa)	1.42

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.799	0.639
2200	0.944	0.892
2000	0.980	0.961
1800	0.994	0.987
1600	0.998	0.996
1400	0.998	0.996
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
700	0.999	0.998
650	0.999	0.998
600	0.999	0.998
550	0.998	0.997
500	0.998	0.997
480	0.997	0.994
460	0.996	0.993
440	0.993	0.986
420	0.991	0.983
400	0.986	0.972
390	0.981	0.962
380	0.973	0.946
370	0.955	0.912
360	0.926	0.857
350	0.882	0.778
340	0.819	0.670
330	0.733	0.538
320	0.629	0.396
310	0.495	0.245
300	0.407	0.166
290	0.307	0.094
280	0.192	0.037

着色度 Color Code	
λ ₈₀ /λ ₅	370/275
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.16

退火增值系数 ECFA.	
β	150

备注 Remarks	

H-LaK54S	734515	$n_d=1.73400$	$v_d=51.49$	$n_F-n_C=0.01426$
		$n_e=1.73740$	$v_e=51.25$	$n_F-n_C=0.01439$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.69382
$n_{1970.1}$	1970.1	1.70124
$n_{1529.6}$	1529.6	1.70909
$n_{1060.0}$	1060.0	1.71725
n_t	1014.0	1.71819
n_s	852.1	1.71819
n_r	706.5	1.72724
n_C	656.3	1.72969
$n_{C'}$	643.9	1.73037
$n_{\text{He-Ne}}$	632.8	1.73101
n_D	589.3	1.73387
n_d	587.6	1.73400
n_e	546.1	1.73740
n_F	486.1	1.74394
$n_{F'}$	480.0	1.74476
n_g	435.8	1.75177
n_h	404.7	1.75831
n_i	365.0	1.76954
$n_{313.2}$	313.2	1.79266
$n_{302.2}$	302.2	1.79959

色散公式常数 Constants of Dispersion Formula	
K_1	1.20772937E+000
L_1	1.76389155E-002
K_2	7.37418371E-001
L_2	6.66515982E-004
K_3	1.35749026E+000
L_3	9.69938806E+001

折射率温度系数常数 Constants of dn/dt	
D_0	5.91E-06
D_1	1.71E-08
D_2	-2.96E-11
E_0	5.65E-07
E_1	5.05E-10
$\lambda_{TK}(\mu\text{m})$	1.96E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^\circ\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	4.7	5.2	5.4	5.6	6.1	6.6
-40~-20	4.8	5.3	5.6	5.7	6.3	6.8
-20~0	5.1	5.4	5.7	5.9	6.5	7.0
0~20	5.4	5.8	6.0	6.4	6.7	7.4
20~40	5.5	6.1	6.4	6.7	7.1	7.6
40~60	5.6	6.2	6.5	6.7	7.2	7.7
60~80	5.6	6.2	6.5	6.7	7.2	7.7
80~100	5.8	6.5	6.6	7.0	7.5	8.0
100~120	5.9	6.7	6.9	7.3	7.7	8.4
120~140	6.3	7.1	7.5	7.6	8.3	8.9

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2751	$P'_{s,t}$	0.2726
$P_{C,s}$	0.5315	$P'_{C',s}$	0.5743
$P_{d,C}$	0.3027	$P'_{d,C'}$	0.2522
$P_{e,d}$	0.2382	$P'_{e,d}$	0.2360
$P_{g,F}$	0.5495	$P'_{g,F'}$	0.4875
$P_{i,h}$	0.7875	$P'_{i,h}$	0.7802

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0177	$\Delta P_{C,s}$	0.0080
$\Delta P_{F,e}$	-0.0024	$\Delta P_{g,F}$	-0.0086

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	639
$T_g(^{\circ}\text{C})$	676
$T_{10}^{14.5}(^{\circ}\text{C})$	597
$T_{10}^{13}(^{\circ}\text{C})$	626
$T_{10}^{7.6}(^{\circ}\text{C})$	729
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	54
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	74
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	770
F_A	61
$E(10^7\text{Pa})$	11387
$G(10^7\text{Pa})$	4401
μ	0.294
$B(10^{-12}/\text{Pa})$	1.93

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.810	0.650
2200	0.948	0.899
2000	0.981	0.962
1800	0.992	0.985
1600	0.998	0.997
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	0.998	0.997
800	0.998	0.996
700	0.997	0.995
650	0.997	0.994
600	0.997	0.994
550	0.997	0.994
500	0.996	0.992
480	0.995	0.990
460	0.993	0.987
440	0.992	0.984
420	0.989	0.979
400	0.984	0.969
390	0.978	0.957
380	0.969	0.938
370	0.951	0.905
360	0.924	0.853
350	0.880	0.780
340	0.820	0.670
330	0.730	0.530
320	0.620	0.390
310	0.490	0.240
300	0.350	0.120
290	0.200	0.040
280		

着色度 Color Code	
λ_{80}/λ_5	365/275
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	4.01

退火增值系数 ECFA.	
β	170

备注 Remarks	

H-LaK59S	691548	n _d = 1.69100	v _d = 54.82	n _F -n _C = 0.01261
		n _e = 1.69401	v _e = 54.56	n _F -n _{C'} = 0.01272

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.65639
n _{1970.1}	1970.1	1.66263
n _{1529.6}	1529.6	1.66926
n _{1060.0}	1060.0	1.67624
n _t	1014.0	1.67706
n _s	852.1	1.67706
n _r	706.5	1.68502
n _C	656.3	1.68718
n _{C'}	643.9	1.68779
n _{He-Ne}	632.8	1.68835
n _D	589.3	1.69089
n _d	587.6	1.69100
n _e	546.1	1.69401
n _F	486.1	1.69979
n _{F'}	480.0	1.70051
n _g	435.8	1.70668
n _h	404.7	1.71243
n _i	365.0	1.72226
n _{313.2}	313.2	1.74246
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	1.63613242E+000
L ₁	8.69769737E-003
K ₂	1.69161636E-001
L ₂	2.95057126E-002
K ₃	9.29984618E-001
L ₃	8.24994109E+001

折射率温度系数常数 Constants of dn/dt	
D ₀	-5.25E-06
D ₁	1.39E-08
D ₂	-3.66E-11
E ₀	5.03E-07
E ₁	5.22E-10
λ _{TK} (μm)	1.84E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	-1.3	-0.7	-0.8	-0.5	-0.3	0.1
-40~-20	-1.2	-0.6	-0.5	-0.3	-0.1	0.5
-20~0	-1.4	-0.8	-0.8	-0.5	-0.4	0.1
0~20	-1.1	-0.7	-0.4	-0.4	-0.2	0.3
20~40	-0.9	-0.5	-0.3	-0.1	0.0	0.6
40~60	-0.9	-0.5	-0.2	-0.1	0.4	0.6
60~80	-0.8	-0.3	-0.2	0.0	0.5	0.8
80~100	-0.8	-0.2	-0.1	0.1	0.7	1.1
100~120	-0.7	-0.2	0.0	0.2	0.8	1.2
120~140	-0.8	-0.5	-0.2	0.1	0.4	0.9

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2723	P' _{s,t}	0.2698
P _{C,s}	0.5309	P' _{C',s}	0.5739
P _{d,C}	0.3030	P' _{d,C'}	0.2526
P _{e,d}	0.2384	P' _{e,d}	0.2362
P _{g,F}	0.5471	P' _{g,F'}	0.4854
P _{i,h}	0.7799	P' _{i,h}	0.7728

异常色散 Abnormal Dispersions			
ΔP _{C,t}	-0.0014	ΔP _{C,s}	-0.0004
ΔP _{F,e}	-0.0012	ΔP _{g,F}	-0.0052

热性质 Thermal Properties	
T _g (℃)	632
T _S (℃)	661
T ₁₀ ^{14.5} (℃)	594
T ₁₀ ¹³ (℃)	616
T ₁₀ ^{7.6} (℃)	709
α _{30/70℃} (10 ⁻⁷ /K)	82
α _{100/300℃} (10 ⁻⁷ /K)	95
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	3
D _A	4
CR	3
RC(S)	1
RA(S)	5

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	537
F _A	161
E(10 ⁷ Pa)	9378
G(10 ⁷ Pa)	3623
μ	0.294
B(10 ⁻¹² /Pa)	1.52

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.812	0.659
2200	0.926	0.858
2000	0.973	0.947
1800	0.987	0.975
1600	0.995	0.990
1400	0.996	0.993
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
700	0.998	0.996
650	0.998	0.996
600	0.997	0.995
550	0.997	0.995
500	0.997	0.995
480	0.996	0.993
460	0.995	0.991
440	0.993	0.987
420	0.992	0.985
400	0.986	0.972
390	0.978	0.956
380	0.963	0.928
370	0.933	0.871
360	0.884	0.781
350	0.800	0.640
340	0.676	0.457
330	0.521	0.271
320	0.352	0.124
310	0.207	0.043
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	375/305
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	3.94

退火增值系数 ECFA.	
β	110

备注 Remarks	

H-LaK61S	741526	$n_d=1.74100$	$v_d=52.64$	$n_F-n_C=0.01408$
		$n_e=1.74435$	$v_e=52.41$	$n_F-n_C=0.01420$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	
$n_{1970.1}$	1970.1	
$n_{1529.6}$	1529.6	
$n_{1060.0}$	1060.0	
n_t	1014.0	1.72533
n_s	852.1	1.72533
n_r	706.5	1.73431
n_C	656.3	1.73673
$n_{C'}$	643.9	1.73741
$n_{\text{He-Ne}}$	632.8	1.73804
n_D	589.3	1.74087
n_d	587.6	1.74100
n_e	546.1	1.74435
n_F	486.1	1.75080
$n_{F'}$	480.0	1.75161
n_g	435.8	1.75849
n_h	404.7	1.76490
n_i	365.0	1.77587
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
A_0	2.96883578E+000
A_1	-1.37037464E-002
A_2	2.24806873E-002
A_3	1.30227060E-004
A_4	3.52478352E-005
A_5	-1.34827056E-006

折射率温度系数常数 Constants of dn/dt	
D_0	3.47E-06
D_1	1.55E-08
D_2	-6.52E-11
E_0	4.66E-07
E_1	6.39E-10
$\lambda_{\text{TK}}(\mu\text{m})$	2.20E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	3.5	3.9	4.1	4.3	4.5	5.2
-20~0	3.5	3.8	3.9	4.3	5.0	5.3
0~20	3.6	4.5	4.6	4.8	5.1	5.2
20~40	4.1	4.5	4.6	4.9	5.5	5.8
40~60	4.1	4.4	4.5	4.9	5.5	6.1
60~80	4.2	4.5	4.7	5.0	5.6	6.1
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2756	$P'_{s,t}$	0.2732
$P_{C,s}$	0.5342	$P'_{C',s}$	0.5773
$P_{d,C}$	0.3034	$P'_{d,C'}$	0.2528
$P_{e,d}$	0.2380	$P'_{e,d}$	0.2359
$P_{g,F}$	0.5464	$P'_{g,F'}$	0.4845
$P_{i,h}$		$P'_{i,h}$	

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0155	$\Delta P_{C,s}$	0.0080
$\Delta P_{F,e}$	-0.0026	$\Delta P_{g,F}$	-0.0096

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	662
$T_S(^{\circ}\text{C})$	684
$T_{10}^{14.5}(^{\circ}\text{C})$	623
$T_{10}^{13}(^{\circ}\text{C})$	652
$T_{10}^{7.6}(^{\circ}\text{C})$	739
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	60
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	72
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	6
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	723
F_A	100
$E(10^7\text{Pa})$	11834
$G(10^7\text{Pa})$	4562
μ	0.297
$B(10^{-12}/\text{Pa})$	1.61

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.810	0.660
2200	0.952	0.906
2000	0.983	0.967
1800	0.996	0.992
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	0.998	0.996
700	0.998	0.996
650	0.998	0.996
600	0.997	0.995
550	0.997	0.995
500	0.996	0.993
480	0.996	0.992
460	0.994	0.989
440	0.993	0.987
420	0.992	0.984
400	0.989	0.978
390	0.986	0.972
380	0.980	0.961
370	0.971	0.943
360	0.955	0.912
350	0.931	0.867
340	0.890	0.800
330	0.840	0.710
320	0.780	0.610
310	0.710	0.500
300	0.620	0.390
290	0.550	0.300
280	0.470	0.220

着色度 Color Code	
λ_{80}/λ_5	370/285
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	4.10

退火增值系数 ECFA.	
β	150

备注 Remarks	

H-ZLaF3S	855366	$n_d=1.85544$	$v_d=36.59$	$n_F-n_C=0.02338$
		$n_e=1.86099$	$v_e=36.34$	$n_F-n_C=0.02369$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	
$n_{1970.1}$	1970.1	
$n_{1529.6}$	1529.6	
$n_{1060.0}$	1060.0	
n_t	1014.0	1.83155
n_s	852.1	1.83155
n_r	706.5	1.84474
n_C	656.3	1.84856
$n_{C'}$	643.9	1.84964
$n_{\text{He-Ne}}$	632.8	1.85065
n_D	589.3	1.85524
n_d	587.6	1.85544
n_e	546.1	1.86099
n_F	486.1	1.87194
$n_{F'}$	480.0	1.87333
n_g	435.8	1.88546
n_h	404.7	1.89718
n_i	365.0	1.91836
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
A_0	3.33260614E+000
A_1	-1.42217301E-002
A_2	3.66299952E-002
A_3	1.02037909E-003
A_4	-3.17481272E-006
A_5	5.76556277E-006

折射率温度系数常数 Constants of dn/dt	
D_0	3.10E-06
D_1	1.77E-08
D_2	-9.07E-11
E_0	8.88E-07
E_1	3.04E-10
$\lambda_{TK}(\mu\text{m})$	2.22E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	3.6	4.5	5.0	5.1	6.1	6.7
-20~0	3.7	4.9	5.2	5.6	6.4	7.9
0~20	4.0	4.9	6.0	6.2	7.1	8.0
20~40	4.4	5.3	5.8	6.2	7.3	8.3
40~60	4.6	5.7	5.9	6.2	7.3	8.6
60~80	4.4	5.9	6.2	6.9	7.4	8.6
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2344	$P'_{s,t}$	0.2313
$P_{C,s}$	0.4931	$P'_{C',s}$	0.5322
$P_{d,C}$	0.2943	$P'_{d,C'}$	0.2448
$P_{e,d}$	0.2373	$P'_{e,d}$	0.2342
$P_{g,F}$	0.5781	$P'_{g,F'}$	0.5118
$P_{i,h}$		$P'_{i,h}$	

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0089	$\Delta P_{C,s}$	0.0049
$\Delta P_{F,e}$	-0.0013	$\Delta P_{g,F}$	-0.0053

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	644
$T_S(^{\circ}\text{C})$	679
$T_{10}^{14.5}(^{\circ}\text{C})$	616
$T_{10}^{13}(^{\circ}\text{C})$	644
$T_{10}^{7.6}(^{\circ}\text{C})$	735
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	60
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	74
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	5
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	681
F_A	98
$E(10^7\text{Pa})$	12068
$G(10^7\text{Pa})$	4663
μ	0.294
$B(10^{-12}/\text{Pa})$	1.69

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.860	0.740
2200	0.962	0.926
2000	0.987	0.975
1800	0.998	0.996
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	0.998	0.997
700	0.998	0.996
650	0.998	0.996
600	0.997	0.994
550	0.996	0.992
500	0.992	0.984
480	0.989	0.978
460	0.984	0.969
440	0.978	0.957
420	0.967	0.936
400	0.941	0.886
390	0.913	0.834
380	0.860	0.740
370	0.730	0.540
360	0.470	0.220
350	0.140	0.020
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	
λ_{70}/λ_5	390/350

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	4.50

退火增值系数 ECFA.	
β	170

备注 Remarks	

H-ZLaF4LS	911353	n _d = 1.91082	v _d = 35.25	n _F -n _C = 0.02584
		n _e = 1.91694	v _e = 35.00	n _F -n _{C'} = 0.02620

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.85898
n _{1970.1}	1970.1	1.86584
n _{1529.6}	1529.6	1.87368
n _{1060.0}	1060.0	1.88352
n _t	1014.0	1.88483
n _s	852.1	1.88483
n _r	706.5	1.89905
n _C	656.3	1.90324
n _{C'}	643.9	1.90443
n _{He-Ne}	632.8	1.90554
n _D	589.3	1.91059
n _d	587.6	1.91082
n _e	546.1	1.91694
n _F	486.1	1.92908
n _{F'}	480.0	1.93062
n _g	435.8	1.94415
n _h	404.7	1.95722
n _i	365.0	1.98088
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	2.21255100E+000
L ₁	1.18172540E-002
K ₂	3.12542616E-001
L ₂	4.95862580E-002
K ₃	1.56862457E+000
L ₃	1.15526490E+002

折射率温度系数常数 Constants of dn/dt	
D ₀	1.14E-06
D ₁	1.37E-08
D ₂	-2.92E-11
E ₀	8.94E-07
E ₁	8.60E-10
λ _{TK} (μm)	2.39E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	2.6	3.7	4.2	4.5	5.6	6.5
-40~-20	2.7	3.8	4.3	4.7	5.7	6.9
-20~0	3.0	4.0	4.4	4.8	5.8	7.0
0~20	3.2	4.1	4.4	5.1	6.0	7.2
20~40	3.2	4.4	4.8	5.3	6.4	7.6
40~60	3.4	4.7	5.1	5.5	6.6	7.9
60~80	3.5	4.9	5.3	5.8	7.0	8.2
80~100	3.6	4.9	5.4	5.9	7.3	8.6
100~120	3.7	4.9	5.6	6.1	7.4	8.8
120~140	3.7	5.1	5.7	6.3	7.5	9.0

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2267	P' _{s,t}	0.2236
P _{C,s}	0.4858	P' _{C',s}	0.5245
P _{d,C}	0.2935	P' _{d,C'}	0.2441
P _{e,d}	0.2370	P' _{e,d}	0.2337
P _{g,F}	0.5832	P' _{g,F'}	0.5163
P _{i,h}	0.9157	P' _{i,h}	0.9032

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0001	ΔP _{C,s}	0.0007
ΔP _{F,e}	-0.0008	ΔP _{g,F}	-0.0024

热性质 Thermal Properties	
T _g (℃)	714
T _g (℃)	750
T ₁₀ ^{14.5} (℃)	
T ₁₀ ¹³ (℃)	
T ₁₀ ^{7.6} (℃)	
α _{-30/70℃} (10 ⁻⁷ /K)	69
α _{100/300℃} (10 ⁻⁷ /K)	88
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	1
CR	1
RC(S)	1
RA(S)	2

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	728
F _A	92
E(10 ⁷ Pa)	12695
G(10 ⁷ Pa)	4868
μ	0.304
B(10 ⁻¹² /Pa)	1.14

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.919	0.845
2200	0.977	0.954
2000	0.990	0.980
1800	0.996	0.993
1600	0.998	0.997
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	0.998	0.997
850	0.998	0.997
800	0.996	0.992
700	0.996	0.992
650	0.995	0.990
600	0.996	0.992
550	0.994	0.988
500	0.988	0.976
480	0.982	0.965
460	0.975	0.950
440	0.963	0.928
420	0.947	0.896
400	0.906	0.821
390	0.865	0.748
380	0.793	0.629
370	0.660	0.435
360	0.418	0.175
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	
λ ₇₀ /λ ₅	400/355

其他性质 Other Properties	
ρ(g/cm ³)	4.84

退火增值系数 ECFA.	
β	130

备注 Remarks	

H-ZLaF50S	804466	n _d = 1.80400	v _d = 46.57	n _F -n _C = 0.01726
		n _e = 1.80811	v _e = 46.32	n _F -n _{C'} = 0.01745

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.76090
n _{1970.1}	1970.1	1.76809
n _{1529.6}	1529.6	1.77587
n _{1060.0}	1060.0	1.78444
n _t	1014.0	1.78548
n _s	852.1	1.78548
n _r	706.5	1.79591
n _C	656.3	1.79882
n _{C'}	643.9	1.79964
n _{He-Ne}	632.8	1.80041
n _D	589.3	1.80385
n _d	587.6	1.80400
n _e	546.1	1.80811
n _F	486.1	1.81608
n _{F'}	480.0	1.81709
n _g	435.8	1.82571
n _h	404.7	1.83381
n _i	365.0	1.84783
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	1.22239213E+000
L ₁	4.45444481E-003
K ₂	9.52859931E-001
L ₂	2.29973985E-002
K ₃	1.37994067E+000
L ₃	9.91991267E+001

折射率温度系数常数 Constants of dn/dt	
D ₀	1.15E-06
D ₁	1.32E-08
D ₂	-1.72E-11
E ₀	6.09E-07
E ₁	4.60E-10
λ _{TK} (μm)	2.11E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	2.6	2.9	3.0	3.6	4.0	4.5
-40~-20	2.6	3.3	3.5	3.7	4.2	4.6
-20~0	2.6	3.2	3.7	3.9	4.3	4.8
0~20	2.6	3.5	3.7	3.9	4.5	5.3
20~40	2.7	3.5	3.8	4.1	4.6	5.4
40~60	2.7	3.6	3.9	4.2	4.7	5.5
60~80	2.9	3.8	4.0	4.3	4.8	5.6
80~100	3.2	3.9	4.1	4.3	5.2	5.8
100~120	3.7	4.0	4.2	4.5	5.4	5.8
120~140	3.8	4.5	4.6	5.1	5.7	6.2

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2571	P' _{s,t}	0.2544
P _{C,s}	0.5160	P' _{C',s}	0.5576
P _{d,C}	0.3000	P' _{d,C'}	0.2499
P _{e,d}	0.2380	P' _{e,d}	0.2355
P _{g,F}	0.5576	P' _{g,F'}	0.4943
P _{i,h}	0.8121	P' _{i,h}	0.8036

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0074	ΔP _{C,s}	0.0042
ΔP _{F,e}	-0.0022	ΔP _{g,F}	-0.0088

热性质 Thermal Properties	
T _g (℃)	669
T _g (℃)	701
T ₁₀ ^{14.5} (℃)	633
T ₁₀ ¹³ (℃)	659
T ₁₀ ^{7.6} (℃)	742
α _{-30/70℃} (10 ⁻⁷ /K)	67
α _{100/300℃} (10 ⁻⁷ /K)	75
λ(W/m·K)	0.820

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	3
CR	1
RC(S)	1
RA(S)	2

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	705
F _A	96
E(10 ⁷ Pa)	12255
G(10 ⁷ Pa)	4720
μ	0.298
B(10 ⁻¹² /Pa)	1.29

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.852	0.726
2200	0.927	0.860
2000	0.960	0.922
1800	0.976	0.953
1600	0.985	0.970
1400	0.991	0.983
1200	0.995	0.990
1060	0.996	0.993
1000	0.997	0.995
950	0.998	0.996
900	0.998	0.996
850	0.998	0.997
800	0.998	0.996
700	0.998	0.996
650	0.998	0.996
600	0.998	0.996
550	0.998	0.996
500	0.997	0.994
480	0.996	0.993
460	0.995	0.991
440	0.993	0.986
420	0.990	0.981
400	0.985	0.970
390	0.980	0.960
380	0.971	0.943
370	0.954	0.910
360	0.926	0.857
350	0.880	0.775
340	0.805	0.648
330	0.677	0.459
320	0.451	0.203
310	0.158	0.025
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	380/310
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.43

退火增值系数 ECFA.	
β	150

备注 Remarks	

H-ZLaF51S	805396	$n_d=1.80450$	$v_d=39.64$	$n_F-n_C=0.02030$
		$n_e=1.80932$	$v_e=39.38$	$n_F-n_{C'}=0.02055$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.75846
$n_{1970.1}$	1970.1	1.76556
$n_{1529.6}$	1529.6	1.77335
$n_{1060.0}$	1060.0	1.78232
n_t	1014.0	1.78344
n_s	852.1	1.78344
n_r	706.5	1.79514
n_C	656.3	1.79849
$n_{C'}$	643.9	1.79943
$n_{\text{He-Ne}}$	632.8	1.80032
n_D	589.3	1.80432
n_d	587.6	1.80450
n_e	546.1	1.80932
n_F	486.1	1.81879
$n_{F'}$	480.0	1.81999
n_g	435.8	1.83042
n_h	404.7	1.84041
n_i	365.0	1.85819
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
K_1	1.22431136E+000
L_1	9.12451830E+001
K_2	3.02590305E-001
L_2	4.26067628E-002
K_3	1.86090715E+000
L_3	9.87031560E-003

折射率温度系数常数 Constants of dn/dt	
D_0	8.54E-06
D_1	1.58E-08
D_2	-6.65E-11
E_0	6.98E-07
E_1	1.18E-09
$\lambda_{TK}(\mu\text{m})$	2.53E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	6.3	7.4	7.6	8.2	8.6	9.2
-20~0	7.1	7.9	8.1	8.3	9.2	10.2
0~20	7.3	8.1	8.6	8.8	9.8	10.7
20~40	7.3	8.2	8.6	9.0	9.9	10.8
40~60	7.6	8.4	8.8	9.1	10.1	11.4
60~80	7.8	8.7	9.2	10.3	10.7	11.7
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2417	$P'_{s,t}$	0.2387
$P_{C,s}$	0.4996	$P'_{C',s}$	0.5395
$P_{d,C}$	0.2962	$P'_{d,C'}$	0.2465
$P_{e,d}$	0.2373	$P'_{e,d}$	0.2344
$P_{g,F}$	0.5732	$P'_{g,F'}$	0.5078
$P_{i,h}$	0.8760	$P'_{i,h}$	0.8652

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0083	$\Delta P_{C,s}$	0.0042
$\Delta P_{F,e}$	-0.0015	$\Delta P_{g,F}$	-0.0050

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	601
$T_S(^{\circ}\text{C})$	631
$T_{10}^{14.5}(^{\circ}\text{C})$	561
$T_{10}^{13}(^{\circ}\text{C})$	587
$T_{10}^{7.6}(^{\circ}\text{C})$	680
$\alpha_{30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	57
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	68
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	664
F_A	101
$E(10^7\text{Pa})$	11142
$G(10^7\text{Pa})$	4263
μ	0.307
$B(10^{-12}/\text{Pa})$	2.23

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.858	0.737
2200	0.960	0.922
2000	0.985	0.970
1800	0.995	0.990
1600	0.998	0.996
1400	0.998	0.997
1200	0.999	0.999
1060	0.999	0.999
1000	0.999	0.999
950	0.999	0.999
900	0.999	0.999
850	0.999	0.999
800	0.998	0.997
700	0.998	0.997
650	0.998	0.997
600	0.998	0.997
550	0.998	0.997
500	0.998	0.997
480	0.996	0.993
460	0.996	0.993
440	0.991	0.982
420	0.985	0.970
400	0.971	0.943
390	0.953	0.910
380	0.930	0.860
370	0.866	0.750
360	0.730	0.530
350	0.450	0.200
340	0.140	0.020
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	410/345
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	4.41

退火增值系数 ECFA.	
β	150

备注 Remarks	

H-ZLaF52S	806410	n _d = 1.80610	v _d = 40.95	n _F -n _C = 0.01969
		n _e = 1.81077	v _e = 40.69	n _F -n _C '= 0.01992

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	
n _{1970.1}	1970.1	
n _{1529.6}	1529.6	
n _{1060.0}	1060.0	
n _t	1014.0	1.78556
n _s	852.1	1.78556
n _r	706.5	1.79699
n _C	656.3	1.80025
n _{C'}	643.9	1.80117
n _{He-Ne}	632.8	1.80204
n _D	589.3	1.80592
n _d	587.6	1.80610
n _e	546.1	1.81077
n _F	486.1	1.81994
n _{F'}	480.0	1.82110
n _g	435.8	1.83118
n _h	404.7	1.84077
n _i	365.0	1.85778
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
A ₀	3.16943454E+000
A ₁	-1.24379117E-002
A ₂	3.22101116E-002
A ₃	1.81456299E-004
A ₄	8.90652926E-005
A ₅	-1.91933145E-006

折射率温度系数常数 Constants of dn/dt	
D ₀	7.46E-06
D ₁	1.78E-08
D ₂	-1.51E-10
E ₀	7.13E-07
E ₁	6.48E-10
λ _{TK} (μm)	2.52E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	6.0	6.2	6.6	6.5	7.6	8.4
-20~0	5.8	7.3	7.4	8.0	8.6	9.3
0~20	7.2	6.4	8.0	8.2	9.1	10.3
20~40	6.4	7.7	7.8	8.3	9.6	10.2
40~60	6.7	7.9	8.2	8.7	9.2	10.2
60~80	7.0	7.9	8.4	8.3	9.6	10.5
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2433	P' _{s,t}	0.2404
P _{C,s}	0.5029	P' _{C',s}	0.5431
P _{d,C}	0.2970	P' _{d,C'}	0.2474
P _{e,d}	0.2372	P' _{e,d}	0.2344
P _{g,F}	0.5710	P' _{g,F'}	0.5059
P _{i,h}		P' _{i,h}	

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0070	ΔP _{C,s}	0.0044
ΔP _{F,e}	-0.0014	ΔP _{g,F}	-0.0050

热性质 Thermal Properties	
T _g (℃)	597
T _S (℃)	630
T ₁₀ ^{14.5} (℃)	557
T ₁₀ ¹³ (℃)	585
T ₁₀ ^{7.6} (℃)	676
α _{-30/70℃} (10 ⁻⁷ /K)	59
α _{100/300℃} (10 ⁻⁷ /K)	73
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	650
F _A	98
E(10 ⁷ Pa)	11146
G(10 ⁷ Pa)	4263
μ	0.307
B(10 ⁻¹² /Pa)	2.12

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.849	0.720
2200	0.956	0.913
2000	0.983	0.967
1800	0.994	0.988
1600	0.998	0.996
1400	0.998	0.997
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	0.998	0.996
700	0.996	0.992
650	0.996	0.992
600	0.996	0.993
550	0.997	0.994
500	0.995	0.991
480	0.994	0.988
460	0.991	0.983
440	0.987	0.975
420	0.984	0.968
400	0.973	0.947
390	0.961	0.923
380	0.938	0.880
370	0.892	0.795
360	0.789	0.622
350	0.566	0.320
340	0.219	0.048
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	395/340
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.43

退火增值系数 ECFA.	
β	140

备注 Remarks	

H-ZLaF53A [*]	834372	n _d = 1.83400	v _d = 37.21	n _F -n _C = 0.02241
		n _e = 1.83930	v _e = 36.98	n _F -n _{C'} = 0.02270

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	
n _{1970.1}	1970.1	
n _{1529.6}	1529.6	
n _{1060.0}	1060.0	
n _t	1014.0	1.81118
n _s	852.1	1.81638
n _r	706.5	1.82374
n _C	656.3	1.82739
n _{C'}	643.9	1.82843
n _{He-Ne}	632.8	1.82940
n _D	589.3	1.83380
n _d	587.6	1.83400
n _e	546.1	1.83930
n _F	486.1	1.84980
n _{F'}	480.0	1.85113
n _g	435.8	1.86276
n _h	404.7	1.87392
n _i	365.0	1.89397
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
A ₀	3.25780650E+000
A ₁	-1.23377840E-002
A ₂	3.55171620E-002
A ₃	7.05690230E-004
A ₄	4.34987330E-005
A ₅	1.95613610E-006

折射率温度系数常数 Constants of dn/dt	
D ₀	7.29E-07
D ₁	9.31E-09
D ₂	-3.94E-11
E ₀	1.14E-06
E ₁	2.56E-09
λ _{TK} (μm)	7.71E-02

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	2.4	3.3	3.8	4	4.4	5.7
-20~0	3.3	3.4	3.9	4.2	5.3	6.1
0~20	3.3	3.6	4.1	4.4	5.4	6.2
20~40	2.8	4.0	4.4	4.7	5.8	6.6
40~60	2.9	4.2	4.4	4.9	5.9	6.9
60~80	3.3	4.5	4.8	5.2	6.2	7.3
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}		P' _{s,t}	
P _{C,s}		P' _{C',s}	
P _{d,C}	0.2949	P' _{d,C'}	0.2454
P _{e,d}	0.2365	P' _{e,d}	0.2335
P _{g,F}	0.5782	P' _{g,F'}	0.5124
P _{i,h}		P' _{i,h}	

异常色散 Abnormal Dispersions			
ΔP _{C,t}		ΔP _{C,s}	
ΔP _{F,e}	-0.0008	ΔP _{g,F}	-0.0041

热性质 Thermal Properties	
T _g (℃)	670
T _g (℃)	712
T ₁₀ ^{14.5} (℃)	550
T ₁₀ ¹³ (℃)	579
T ₁₀ ^{7.6} (℃)	682
α _{-30/70℃} (10 ⁻⁷ /K)	65
α _{100/300℃} (10 ⁻⁷ /K)	77
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	2
CR	
RC(S)	1
RA(S)	4

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	602
F _A	102
E(10 ⁷ Pa)	10621
G(10 ⁷ Pa)	4070
μ	0.305
B(10 ⁻¹² /Pa)	

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.860	0.740
2200	0.960	0.921
2000	0.986	0.972
1800	0.997	0.994
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	0.998	0.997
700	0.998	0.996
650	0.997	0.995
600	0.997	0.994
550	0.996	0.992
500	0.992	0.985
480	0.990	0.980
460	0.986	0.972
440	0.980	0.961
420	0.971	0.943
400	0.949	0.901
390	0.925	0.855
380	0.880	0.770
370	0.790	0.630
360	0.610	0.370
350	0.320	0.100
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	
λ ₇₀ /λ ₅	390/350

其他性质 Other Properties	
ρ(g/cm ³)	4.25

退火增值系数 ECFA.	
β	170

备注 Remarks	

H-ZLaF53B	834372	n _d = 1.83400	v _d = 37.21	n _F -n _C = 0.02241
		n _e = 1.83932	v _e = 36.96	n _{F'} -n _{C'} = 0.02271

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.78697
n _{1970.1}	1970.1	1.79358
n _{1529.6}	1529.6	1.80100
n _{1060.0}	1060.0	1.81001
n _t	1014.0	1.81118
n _s	852.1	1.81118
n _r	706.5	1.82374
n _C	656.3	1.82740
n _{C'}	643.9	1.82843
n _{He-Ne}	632.8	1.82941
n _D	589.3	1.83380
n _d	587.6	1.83400
n _e	546.1	1.83932
n _F	486.1	1.84981
n _{F'}	480.0	1.85114
n _g	435.8	1.86277
n _h	404.7	1.87395
n _i	365.0	1.89400
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	3.02813825E-001
L ₁	4.55920200E-002
K ₂	1.25522353E+000
L ₂	9.99412194E+001
K ₃	1.95575794E+000
L ₃	1.08167110E-002

折射率温度系数常数 Constants of dn/dt	
D ₀	9.87E-06
D ₁	1.65E-08
D ₂	-3.22E-11
E ₀	8.90E-07
E ₁	1.12E-09
λ _{TK} (μm)	2.43E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	7.9	8.8	9.2	9.8	10.4	11.5
-40~-20	8.2	9.0	9.4	9.9	10.6	11.9
-20~0	8.2	9.2	9.5	9.9	11.0	12.3
0~20	8.3	9.4	9.8	10.2	11.5	12.6
20~40	8.5	9.6	10.3	10.8	11.9	13.0
40~60	8.7	10.2	10.6	11.1	12.3	13.6
60~80	9.0	10.4	10.7	11.2	12.3	13.9
80~100	9.1	10.5	10.9	11.4	12.6	14.0
100~120	9.3	10.7	11.2	11.7	13.0	14.4
120~140	9.5	11.0	11.7	12.1	13.5	14.9

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2322	P' _{s,t}	0.2292
P _{C,s}	0.4913	P' _{C',s}	0.5305
P _{d,C}	0.2947	P' _{d,C'}	0.2452
P _{e,d}	0.2372	P' _{e,d}	0.2341
P _{g,F}	0.5783	P' _{g,F'}	0.5121
P _{ih}	0.8944	P' _{ih}	0.8828

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0019	ΔP _{C,s}	0.0016
ΔP _{F,e}	-0.0011	ΔP _{g,F}	-0.0040

热性质 Thermal Properties	
T _g (℃)	569
T _S (℃)	604
T ₁₀ ^{14.5} (℃)	520
T ₁₀ ¹³ (℃)	552
T ₁₀ ^{7.6} (℃)	661
α _{-30/70℃} (10 ⁻⁷ /K)	59
α _{100/300℃} (10 ⁻⁷ /K)	72
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	2
CR	1
RC(S)	1
RA(S)	4

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	613
F _A	93
E(10 ⁷ Pa)	11043
G(10 ⁷ Pa)	4204
μ	0.313
B(10 ⁻¹² /Pa)	2.47

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.901	0.811
2200	0.973	0.947
2000	0.990	0.980
1800	0.997	0.995
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	0.997	0.995
700	0.996	0.993
650	0.996	0.993
600	0.995	0.990
550	0.995	0.990
500	0.993	0.987
480	0.991	0.982
460	0.988	0.976
440	0.981	0.963
420	0.975	0.951
400	0.952	0.906
390	0.928	0.861
380	0.884	0.781
370	0.792	0.628
360	0.611	0.373
350	0.283	0.080
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	420/345
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.54

退火增值系数 ECFA.	
β	100

备注 Remarks	

H-ZLaF55D	835427	n _d = 1.83481	v _d = 42.73	n _F -n _C = 0.01954
		n _e = 1.83946	v _e = 42.48	n _{F'} -n _{C'} = 0.01976

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.78918
n _{1970.1}	1970.1	1.79635
n _{1529.6}	1529.6	1.80419
n _{1060.0}	1060.0	1.81312
n _t	1014.0	1.81424
n _s	852.1	1.81424
n _r	706.5	1.82573
n _C	656.3	1.82898
n _{C'}	643.9	1.82990
n _{He-Ne}	632.8	1.83076
n _D	589.3	1.83464
n _d	587.6	1.83481
n _e	546.1	1.83946
n _F	486.1	1.84852
n _{F'}	480.0	1.84967
n _g	435.8	1.85955
n _h	404.7	1.86891
n _i	365.0	1.88533
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	2.27765275E-001
L ₁	4.12221798E-002
K ₂	2.04686906E+000
L ₂	1.07489490E-002
K ₃	1.20888928E+000
L ₃	8.78518998E+001

折射率温度系数常数 Constants of dn/dt	
D ₀	1.05E-06
D ₁	1.59E-08
D ₂	-2.67E-11
E ₀	6.94E-07
E ₁	2.64E-10
λ _{TK} (μm)	2.21E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	2.2	3.2	3.6	3.7	4.3	5.1
-40~-20	2.3	3.4	3.7	3.8	4.5	5.2
-20~0	2.4	3.4	3.7	3.9	4.6	5.4
0~20	2.5	3.5	3.7	4.1	4.8	5.5
20~40	2.9	3.6	4.0	4.3	5.2	5.7
40~60	3.2	4.0	4.2	4.6	5.3	6.0
60~80	3.3	4.1	4.3	4.7	5.4	6.3
80~100	3.5	4.2	4.5	4.8	5.6	6.6
100~120	3.5	4.3	4.6	4.9	5.8	6.9
120~140	3.6	4.5	4.8	5.1	6.1	7.1

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2475	P' _{s,t}	0.2447
P _{C,s}	0.5072	P' _{C',s}	0.5479
P _{d,C}	0.2982	P' _{d,C'}	0.2483
P _{e,d}	0.2377	P' _{e,d}	0.2350
P _{g,F}	0.5643	P' _{g,F'}	0.5001
P _{i,h}	0.8405	P' _{i,h}	0.8309

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0071	ΔP _{C,s}	0.0044
ΔP _{F,e}	-0.0022	ΔP _{g,F}	-0.0086

热性质 Thermal Properties	
T _g (℃)	692
T _S (℃)	722
T ₁₀ ^{14.5} (℃)	645
T ₁₀ ¹³ (℃)	674
T ₁₀ ^{7.6} (℃)	771
α _{-30/70℃} (10 ⁻⁷ /K)	64
α _{100/300℃} (10 ⁻⁷ /K)	81
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	2
CR	1
RC(S)	1
RA(S)	2

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	684
F _A	97
E(10 ⁷ Pa)	12359
G(10 ⁷ Pa)	4755
μ	0.299
B(10 ⁻¹² /Pa)	1.26

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.869	0.756
2200	0.965	0.931
2000	0.986	0.972
1800	0.996	0.991
1600	0.999	0.997
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
700	0.999	0.998
650	0.999	0.998
600	0.999	0.998
550	0.999	0.998
500	0.997	0.995
480	0.996	0.993
460	0.994	0.989
440	0.991	0.982
420	0.987	0.974
400	0.978	0.957
390	0.969	0.939
380	0.956	0.913
370	0.929	0.863
360	0.888	0.788
350	0.817	0.668
340	0.691	0.478
330	0.468	0.219
320	0.170	0.029
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	400/320
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.54

退火增值系数 ECFA.	
β	140

备注 Remarks	

H-ZLaF56S	806333	n _d = 1.80610	v _d = 33.27	n _F -n _C = 0.02423
		n _e = 1.81184	v _e = 33.03	n _{F'} -n _{C'} = 0.02458

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	
n _{1970.1}	1970.1	
n _{1529.6}	1529.6	
n _{1060.0}	1060.0	
n _t	1014.0	1.78189
n _s	852.1	1.78189
n _r	706.5	1.79513
n _C	656.3	1.79902
n _{C'}	643.9	1.80012
n _{He-Ne}	632.8	1.80117
n _D	589.3	1.80589
n _d	587.6	1.80610
n _e	546.1	1.81184
n _F	486.1	1.82325
n _{F'}	480.0	1.82470
n _g	435.8	1.83755
n _h	404.7	1.85016
n _i	365.0	1.87351
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
A ₀	3.14933428E+000
A ₁	-1.11549297E-002
A ₂	3.75191596E-002
A ₃	7.87288786E-004
A ₄	2.97271180E-005
A ₅	7.44861477E-006

折射率温度系数常数 Constants of dn/dt	
D ₀	-9.87E-07
D ₁	1.97E-08
D ₂	-1.23E-10
E ₀	8.59E-07
E ₁	9.48E-10
λ _{TK} (μm)	2.52E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	0.6	1.2	1.6	2.1	3.0	3.7
-20~0	1.1	1.9	2.4	2.6	3.4	5.0
0~20	1.4	2.6	2.8	3.3	3.8	5.3
20~40	1.5	2.8	3.3	3.6	4.8	5.4
40~60	1.8	2.9	3.3	3.7	4.9	6.0
60~80	2.1	2.9	3.3	3.7	5.0	6.3
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2241	P' _{s,t}	0.2209
P _{C,s}	0.4829	P' _{C',s}	0.5208
P _{d,C}	0.2924	P' _{d,C'}	0.2431
P _{e,d}	0.2368	P' _{e,d}	0.2334
P _{g,F}	0.5903	P' _{g,F'}	0.5229
P _{i,h}		P' _{i,h}	

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0040	ΔP _{C,s}	0.0025
ΔP _{F,e}	-0.0005	ΔP _{g,F}	0.0013

热性质 Thermal Properties	
T _g (℃)	659
T _g (℃)	707
T ₁₀ ^{14.5} (℃)	616
T ₁₀ ¹³ (℃)	650
T ₁₀ ^{7.6} (℃)	767
α _{30/70℃} (10 ⁻⁷ /K)	74
α _{100/300℃} (10 ⁻⁷ /K)	86
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	2
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	582
F _A	149
E(10 ⁷ Pa)	11594
G(10 ⁷ Pa)	4526
μ	0.281
B(10 ⁻¹² /Pa)	1.79

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.905	0.820
2200	0.959	0.921
2000	0.985	0.971
1800	0.993	0.985
1600	0.997	0.994
1400	0.998	0.996
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	0.997	0.995
700	0.997	0.995
650	0.997	0.995
600	0.997	0.995
550	0.996	0.993
500	0.993	0.986
480	0.990	0.981
460	0.986	0.972
440	0.980	0.961
420	0.971	0.942
400	0.945	0.893
390	0.912	0.831
380	0.842	0.709
370	0.675	0.455
360	0.333	0.111
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	425/360
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	3.70

退火增值系数 ECFA.	
β	170

备注 Remarks	

H-ZLaF66S	801350	n _d = 1.80100	v _d = 34.97	n _F -n _C = 0.02291
		n _e = 1.80642	v _e = 34.71	n _F -n _{C'} = 0.02323

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.75372
n _{1970.1}	1970.1	1.76030
n _{1529.6}	1529.6	1.76772
n _{1060.0}	1060.0	1.77676
n _t	1014.0	1.77793
n _s	852.1	1.77793
n _r	706.5	1.79059
n _C	656.3	1.79429
n _{C'}	643.9	1.79534
n _{He-Ne}	632.8	1.79633
n _D	589.3	1.80080
n _d	587.6	1.80100
n _e	546.1	1.80642
n _F	486.1	1.81720
n _{F'}	480.0	1.81858
n _g	435.8	1.83066
n _h	404.7	1.84243
n _i	365.0	1.86400
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	2.33018785E-001
L ₁	5.37435377E-002
K ₂	1.90660392E+000
L ₂	1.14336559E-002
K ₃	1.37147086E+000
L ₃	1.10630887E+002

折射率温度系数常数 Constants of dn/dt	
D ₀	-1.89E-06
D ₁	1.64E-08
D ₂	-1.41E-10
E ₀	8.70E-07
E ₁	1.01E-09
λ _{TK} (μm)	2.45E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	-0.3	0.8	1.3	1.5	2.2	3.4
-20~0	0.8	1.3	1.7	2.1	3.3	4.0
0~20	1.0	2.0	2.3	2.6	3.7	4.6
20~40	1.0	2.1	2.4	3.1	3.7	5.1
40~60	1.1	2.1	2.6	3.1	3.8	5.1
60~80	1.2	2.1	3.0	3.1	4.4	5.3
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2285	P' _{s,t}	0.2253
P _{C,s}	0.4855	P' _{C',s}	0.5240
P _{d,C}	0.2929	P' _{d,C'}	0.2435
P _{e,d}	0.2367	P' _{e,d}	0.2334
P _{g,F}	0.5877	P' _{g,F'}	0.5202
P _{i,h}	0.9414	P' _{i,h}	0.9282

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0031	ΔP _{C,s}	0.0011
ΔP _{F,e}	-0.0001	ΔP _{g,F}	0.0016

热性质 Thermal Properties	
T _g (℃)	657
T _g (℃)	705
T ₁₀ ^{14.5} (℃)	612
T ₁₀ ¹³ (℃)	645
T ₁₀ ^{7.6} (℃)	764
α _{30/70℃} (10 ⁻⁷ /K)	79
α _{100/300℃} (10 ⁻⁷ /K)	93
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	596
F _A	204
E(10 ⁷ Pa)	10980
G(10 ⁷ Pa)	4268
μ	0.286
B(10 ⁻¹² /Pa)	1.69

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.906	0.820
2200	0.964	0.929
2000	0.986	0.973
1800	0.994	0.988
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	0.998	0.997
800	0.998	0.996
700	0.997	0.995
650	0.997	0.994
600	0.996	0.992
550	0.994	0.988
500	0.988	0.976
480	0.984	0.968
460	0.979	0.959
440	0.972	0.944
420	0.960	0.921
400	0.926	0.857
390	0.892	0.795
380	0.814	0.662
370	0.635	0.403
360	0.381	0.145
350	0.077	0.006
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	425/355
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	3.81

退火增值系数 ECFA.	
β	170

备注 Remarks	

H-ZLaF68A	883409	n _d = 1.88300	v _d = 40.85	n _F -n _C = 0.02162
		n _e = 1.88814	v _e = 40.60	n _F -n _{C'} = 0.02188

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.83716
n _{1970.1}	1970.1	1.84353
n _{1529.6}	1529.6	1.85074
n _{1060.0}	1060.0	1.85957
n _t	1014.0	1.86072
n _s	852.1	1.86072
n _r	706.5	1.87302
n _C	656.3	1.87658
n _{C'}	643.9	1.87759
n _{He-Ne}	632.8	1.87854
n _D	589.3	1.88281
n _d	587.6	1.88300
n _e	546.1	1.88814
n _F	486.1	1.89820
n _{F'}	480.0	1.89947
n _g	435.8	1.91047
n _h	404.7	1.92089
n _i	365.0	1.93914
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	1.58833884E+000
L ₁	6.89365045E-003
K ₂	8.51761035E-001
L ₂	2.88290435E-002
K ₃	1.58277416E+000
L ₃	1.25035659E+002

折射率温度系数常数 Constants of dn/dt	
D ₀	6.22E-07
D ₁	1.34E-08
D ₂	-3.94E-11
E ₀	8.98E-07
E ₁	8.81E-10
λ _{TK} (μm)	1.75E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	2.4	3.3	3.5	3.9	4.7	5.4
-40~-20	2.4	3.3	3.6	4.0	4.7	5.5
-20~0	2.5	3.4	3.8	4.1	4.8	5.6
0~20	2.6	3.5	3.9	4.5	4.9	6.0
20~40	2.6	3.9	4.2	4.6	5.6	6.3
40~60	2.9	4.1	4.4	4.9	5.6	6.6
60~80	3.1	4.1	4.5	4.7	5.8	6.8
80~100	3.1	4.2	4.6	5.0	6.0	6.9
100~120	3.2	4.2	4.7	5.1	6.1	7.0
120~140	3.2	4.3	4.7	5.1	6.1	7.1

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2362	P' _{s,t}	0.2333
P _{C,s}	0.4978	P' _{C',s}	0.5380
P _{d,C}	0.2968	P' _{d,C'}	0.2471
P _{e,d}	0.2377	P' _{e,d}	0.2348
P _{g,F}	0.5677	P' _{g,F'}	0.5028
P _{i,h}	0.8441	P' _{i,h}	0.8340

异常色散 Abnormal Dispersions			
ΔP _{C,t}	-0.0048	ΔP _{C,s}	-0.0005
ΔP _{F,e}	-0.0018	ΔP _{g,F}	-0.0084

热性质 Thermal Properties	
T _g (℃)	696
T _g (℃)	746
T ₁₀ ^{14.5} (℃)	629
T ₁₀ ¹³ (℃)	667
T ₁₀ ^{7.6} (℃)	
α _{-30/70℃} (10 ⁻⁷ /K)	70
α _{100/300℃} (10 ⁻⁷ /K)	84
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	1
CR	1
RC(S)	1
RA(S)	2

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	678
F _A	99
E(10 ⁷ Pa)	12461
G(10 ⁷ Pa)	4768
μ	0.307
B(10 ⁻¹² /Pa)	1.08

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.931	0.867
2200	0.980	0.960
2000	0.992	0.984
1800	0.997	0.995
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	0.997
800	0.998	0.996
700	0.998	0.996
650	0.997	0.995
600	0.997	0.995
550	0.997	0.995
500	0.993	0.986
480	0.989	0.979
460	0.984	0.969
440	0.976	0.953
420	0.968	0.937
400	0.950	0.902
390	0.931	0.866
380	0.901	0.811
370	0.851	0.725
360	0.777	0.603
350	0.669	0.448
340	0.522	0.273
330	0.341	0.116
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	
λ ₇₀ /λ ₅	390/330

其他性质 Other Properties	
ρ(g/cm ³)	5.42

退火增值系数 ECFA.	
β	110

备注 Remarks	

H-ZLaF68N	883392	n _d = 1.88300	v _d = 39.22	n _F -n _C = 0.02252
		n _e = 1.88835	v _e = 38.97	n _F -n _{C'} = 0.02280

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.83472
n _{1970.1}	1970.1	1.84162
n _{1529.6}	1529.6	1.84935
n _{1060.0}	1060.0	1.85865
n _t	1014.0	1.85986
n _s	852.1	1.85986
n _r	706.5	1.87264
n _C	656.3	1.87634
n _{C'}	643.9	1.87739
n _{He-Ne}	632.8	1.87837
n _D	589.3	1.88280
n _d	587.6	1.88300
n _e	546.1	1.88835
n _F	486.1	1.89885
n _{F'}	480.0	1.90018
n _g	435.8	1.91175
n _h	404.7	1.92280
n _i	365.0	1.94240
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	1.49455025E+000
L ₁	1.09762523E+002
K ₂	2.07574257E+000
L ₂	1.04040770E-002
K ₃	3.61138143E-001
L ₃	4.12621420E-002

折射率温度系数常数 Constants of dn/dt	
D ₀	-9.92E-09
D ₁	1.31E-08
D ₂	-2.62E-11
E ₀	7.34E-07
E ₁	7.89E-10
λ _{TK} (μm)	2.37E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	1.9	2.6	3.0	3.3	4.1	5.0
-40~-20	2.0	2.8	3.2	3.4	4.2	5.1
-20~0	2.1	2.9	3.2	3.5	4.3	5.2
0~20	2.2	3.0	3.3	3.6	4.4	5.5
20~40	2.3	3.1	3.4	4.0	4.8	5.9
40~60	2.4	3.5	3.8	4.2	5.0	6.0
60~80	2.5	3.5	4.0	4.4	5.5	6.2
80~100	2.7	3.6	4.1	4.6	5.6	6.4
100~120	2.8	3.8	4.2	4.7	5.6	6.7
120~140	2.8	4.0	4.3	4.6	5.7	7.0

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2360	P' _{s,t}	0.2331
P _{C,s}	0.4959	P' _{C',s}	0.5357
P _{d,C}	0.2959	P' _{d,C'}	0.2463
P _{e,d}	0.2374	P' _{e,d}	0.2345
P _{g,F}	0.5729	P' _{g,F'}	0.5074
P _{i,h}	0.8705	P' _{i,h}	0.8597

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0009	ΔP _{C,s}	0.0015
ΔP _{F,e}	-0.0015	ΔP _{g,F}	-0.0060

热性质 Thermal Properties	
T _g (℃)	707
T _g (℃)	755
T ₁₀ ^{14.5} (℃)	671
T ₁₀ ¹³ (℃)	702
T ₁₀ ^{7.6} (℃)	803
α _{-30/70℃} (10 ⁻⁷ /K)	58
α _{100/300℃} (10 ⁻⁷ /K)	86
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	1
CR	1
RC(S)	1
RA(S)	1

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	687
F _A	96
E(10 ⁷ Pa)	12583
G(10 ⁷ Pa)	4831
μ	0.303
B(10 ⁻¹² /Pa)	1.03

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.906	0.821
2200	0.975	0.951
2000	0.989	0.979
1800	0.997	0.995
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	0.998	0.996
700	0.997	0.995
650	0.997	0.995
600	0.997	0.994
550	0.997	0.994
500	0.995	0.991
480	0.992	0.985
460	0.989	0.979
440	0.984	0.968
420	0.976	0.953
400	0.957	0.916
390	0.938	0.880
380	0.905	0.819
370	0.843	0.711
360	0.729	0.531
350	0.513	0.263
340	0.205	0.042
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	
λ ₇₀ /λ ₅	380/340

其他性质 Other Properties	
ρ(g/cm ³)	5.17

退火增值系数 ECFA.	
β	130

备注 Remarks	

H-ZLaF69A	816466	n _d = 1.81600	v _d = 46.55	n _F -n _C = 0.01753
		n _e = 1.82017	v _e = 46.30	n _F '-n _C '= 0.01771

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.77316
n _{1970.1}	1970.1	1.78015
n _{1529.6}	1529.6	1.78774
n _{1060.0}	1060.0	1.79621
n _t	1014.0	1.79725
n _s	852.1	1.79725
n _r	706.5	1.80779
n _C	656.3	1.81074
n _{C'}	643.9	1.81157
n _{He-Ne}	632.8	1.81235
n _D	589.3	1.81585
n _d	587.6	1.81600
n _e	546.1	1.82017
n _F	486.1	1.82827
n _{F'}	480.0	1.82929
n _g	435.8	1.83803
n _h	404.7	1.84624
n _i	365.0	1.86043
n _{313.2}	313.2	1.89013
n _{302.2}	302.2	1.89917

色散公式常数 Constants of Dispersion Formula	
K ₁	6.59414732E-001
L ₁	2.56059960E-002
K ₂	1.55675638E+000
L ₂	7.27769577E-003
K ₃	1.25417967E+000
L ₃	9.31176682E+001

折射率温度系数常数 Constants of dn/dt	
D ₀	1.12E-06
D ₁	1.52E-08
D ₂	-3.71E-11
E ₀	6.39E-07
E ₁	4.90E-10
λ _{TK} (μm)	1.92E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	2.4	3.0	3.2	3.4	4.1	4.7
-40~-20	2.5	3.1	3.3	3.6	4.1	4.7
-20~0	2.6	3.1	3.4	3.6	4.1	4.8
0~20	2.6	3.2	3.5	3.7	4.3	5.0
20~40	2.9	3.7	3.8	4.3	4.7	5.4
40~60	2.9	3.7	3.9	4.3	5.0	5.4
60~80	3.1	3.8	4.1	4.3	5.1	5.5
80~100	3.2	4.0	4.3	4.4	5.1	5.8
100~120	3.2	4.0	4.4	4.5	5.2	6.1
120~140	3.3	4.1	4.5	4.7	5.3	6.3

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2548	P' _{s,t}	0.2521
P _{C,s}	0.5148	P' _{C',s}	0.5565
P _{d,C}	0.3000	P' _{d,C'}	0.2499
P _{e,d}	0.2380	P' _{e,d}	0.2356
P _{g,F}	0.5569	P' _{g,F'}	0.4938
P _{i,h}	0.8095	P' _{i,h}	0.8011

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0040	ΔP _{C,s}	0.0030
ΔP _{F,e}	-0.0023	ΔP _{g,F}	-0.0095

热性质 Thermal Properties	
T _g (℃)	696
T _g (℃)	736
T ₁₀ ^{14.5} (℃)	665
T ₁₀ ¹³ (℃)	693
T ₁₀ ^{7.6} (℃)	797
α _{-30/70℃} (10 ⁻⁷ /K)	68
α _{100/300℃} (10 ⁻⁷ /K)	84
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	2
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	721
F _A	128
E(10 ⁷ Pa)	12469
G(10 ⁷ Pa)	4802
μ	0.298
B(10 ⁻¹² /Pa)	1.22

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.874	0.764
2200	0.967	0.936
2000	0.988	0.976
1800	0.996	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
700	0.999	0.998
650	0.999	0.998
600	0.999	0.998
550	0.998	0.997
500	0.998	0.996
480	0.997	0.995
460	0.996	0.993
440	0.995	0.990
420	0.993	0.986
400	0.988	0.977
390	0.985	0.970
380	0.978	0.956
370	0.965	0.931
360	0.942	0.888
350	0.910	0.828
340	0.862	0.743
330	0.796	0.634
320	0.709	0.502
310	0.514	0.264
300	0.438	0.192
290	0.281	0.079
280		

着色度 Color Code	
λ ₈₀ /λ ₅	380/305
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	5.00

退火增值系数 ECFA.	
β	130

备注 Remarks	

H-ZLaF71S	850323	n _d = 1.85026	v _d = 32.30	n _F -n _C = 0.02633
		n _e = 1.85649	v _e = 32.06	n _{F'} -n _{C'} = 0.02672

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.79626
n _{1970.1}	1970.1	1.80382
n _{1529.6}	1529.6	1.81230
n _{1060.0}	1060.0	1.82259
n _t	1014.0	1.82393
n _s	852.1	1.82393
n _r	706.5	1.83835
n _C	656.3	1.84258
n _{C'}	643.9	1.84378
n _{He-Ne}	632.8	1.84491
n _D	589.3	1.85003
n _d	587.6	1.85026
n _e	546.1	1.85649
n _F	486.1	1.86891
n _{F'}	480.0	1.87050
n _g	435.8	1.88452
n _h	404.7	1.89827
n _i	365.0	1.92372
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	2.76154598E-001
L ₁	5.57996382E-002
K ₂	2.02569085E+000
L ₂	1.20700588E-002
K ₃	1.44513509E+000
L ₃	9.98778223E+001

折射率温度系数常数 Constants of dn/dt	
D ₀	-2.79E-06
D ₁	1.48E-08
D ₂	-2.75E-11
E ₀	8.00E-07
E ₁	8.15E-10
λ _{TK} (μm)	2.75E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	-0.2	0.9	1.3	1.7	2.7	3.7
-40~-20	0.1	0.9	1.4	1.9	2.7	3.9
-20~0	0.1	1.2	1.5	1.9	2.8	4.1
0~20	0.4	1.3	1.7	1.9	3.2	4.5
20~40	0.7	1.3	1.9	2.1	3.5	4.7
40~60	0.8	1.7	2.3	2.6	3.7	5.1
60~80	0.9	2.1	2.4	3.1	4.2	5.7
80~100	0.9	2.3	2.6	3.3	4.5	6.0
100~120	0.9	2.3	2.7	3.4	4.7	6.1
120~140	0.9	2.3	2.7	3.4	4.8	6.2

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2263	P' _{s,t}	0.2230
P _{C,s}	0.4820	P' _{C',s}	0.5200
P _{d,C}	0.2918	P' _{d,C'}	0.2425
P _{e,d}	0.2365	P' _{e,d}	0.2331
P _{g,F}	0.5931	P' _{g,F'}	0.5249
P _{ih}	0.9668	P' _{ih}	0.9527

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0099	ΔP _{C,s}	0.0039
ΔP _{F,e}	-0.0002	ΔP _{g,F}	0.0024

热性质 Thermal Properties	
T _g (℃)	612
T _g (℃)	655
T ₁₀ ^{14.5} (℃)	574
T ₁₀ ¹³ (℃)	605
T ₁₀ ^{7.6} (℃)	706
α _{30/70℃} (10 ⁻⁷ /K)	76
α _{100/300℃} (10 ⁻⁷ /K)	92
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	607
F _A	131
E(10 ⁷ Pa)	11225
G(10 ⁷ Pa)	4352
μ	0.29
B(10 ⁻¹² /Pa)	1.78

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.864	0.746
2200	0.954	0.910
2000	0.983	0.967
1800	0.993	0.987
1600	0.997	0.995
1400	0.998	0.996
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	0.996	0.992
700	0.995	0.991
650	0.994	0.989
600	0.994	0.989
550	0.993	0.986
500	0.986	0.972
480	0.981	0.962
460	0.974	0.949
440	0.963	0.927
420	0.945	0.893
400	0.901	0.812
390	0.858	0.737
380	0.782	0.611
370	0.627	0.393
360	0.332	0.110
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	
λ ₇₀ /λ ₅	405/360

其他性质 Other Properties	
ρ(g/cm ³)	4.22

退火增值系数 ECFA.	
β	180

备注 Remarks	

H-ZLaF75S	904313	$n_d=1.90366$	$v_d=31.32$	$n_F-n_C=0.02886$
		$n_e=1.91048$	$v_e=31.08$	$n_F-n_C=0.02929$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.84687
$n_{1970.1}$	1970.1	1.85438
$n_{1529.6}$	1529.6	1.86292
$n_{1060.0}$	1060.0	1.87363
n_t	1014.0	1.87506
n_s	852.1	1.87506
n_r	706.5	1.89065
n_C	656.3	1.89526
$n_{C'}$	643.9	1.89657
$n_{\text{He-Ne}}$	632.8	1.89781
n_D	589.3	1.90341
n_d	587.6	1.90366
n_e	546.1	1.91048
n_F	486.1	1.92412
$n_{F'}$	480.0	1.92587
n_g	435.8	1.94129
n_h	404.7	1.95645
n_i	365.0	1.98460
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
K_1	1.50615126E+000
L_1	1.02994725E+002
K_2	2.18809221E+000
L_2	1.27716105E-002
K_3	2.97955776E-001
L_3	5.69661668E-002

折射率温度系数常数 Constants of dn/dt	
D_0	-2.63E-06
D_1	1.36E-08
D_2	-3.31E-11
E_0	9.08E-07
E_1	1.12E-09
$\lambda_{TK}(\mu\text{m})$	2.65E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	-0.3	1.1	1.3	1.8	2.9	4.0
-40~-20	-0.2	1.2	1.5	2.0	3.1	4.3
-20~0	0.4	1.4	2.0	2.4	3.4	4.7
0~20	0.8	1.8	2.3	2.8	3.8	5.3
20~40	0.8	1.9	2.4	2.9	4.0	5.6
40~60	0.9	2.1	2.5	3.0	4.5	6.0
60~80	0.9	2.3	2.8	3.2	5.0	6.3
80~100	1.0	2.3	2.9	3.4	4.6	6.6
100~120	1.1	2.6	3.2	3.9	5.2	7.1
120~140	1.3	2.9	3.5	4.1	5.7	7.5

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2217	$P'_{s,t}$	0.2184
$P_{C,s}$	0.4781	$P'_{C',s}$	0.5158
$P_{d,C}$	0.2911	$P'_{d,C'}$	0.2420
$P_{e,d}$	0.2364	$P'_{e,d}$	0.2329
$P_{g,F}$	0.5953	$P'_{g,F'}$	0.5267
$P_{i,h}$	0.9753	$P'_{i,h}$	0.9608

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0061	$\Delta P_{C,s}$	0.0024
$\Delta P_{F,e}$	0.0000	$\Delta P_{g,F}$	0.0029

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	671
$T_S(^{\circ}\text{C})$	702
$T_{10}^{14.5}(^{\circ}\text{C})$	622
$T_{10}^{13}(^{\circ}\text{C})$	654
$T_{10}^{7.6}(^{\circ}\text{C})$	753
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	78
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	88
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	2
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	685
F_A	124
$E(10^7\text{Pa})$	11734
$G(10^7\text{Pa})$	4523
μ	0.297
$B(10^{-12}/\text{Pa})$	

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau_{5\text{mm}}$	$\tau_{10\text{mm}}$
2400	0.906	0.821
2200	0.973	0.946
2000	0.989	0.978
1800	0.997	0.994
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	0.997	0.995
700	0.996	0.993
650	0.996	0.993
600	0.996	0.993
550	0.995	0.991
500	0.988	0.977
480	0.984	0.969
460	0.977	0.955
440	0.966	0.934
420	0.949	0.901
400	0.909	0.827
390	0.868	0.753
380	0.791	0.625
370	0.625	0.390
360	0.302	0.091
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	
λ_{70}/λ_5	405/360

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	4.54

退火增值系数 ECFA.	
β	160

备注 Remarks	

H-ZLaF76S	850301	$n_d=1.85013$	$v_d=30.06$	$n_F-n_C=0.02829$
		$n_e=1.85681$	$v_e=29.83$	$n_F-n_C=0.02872$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.79249
$n_{1970.1}$	1970.1	1.80059
$n_{1529.6}$	1529.6	1.80967
$n_{1060.0}$	1060.0	1.82063
n_t	1014.0	1.82206
n_s	852.1	1.82206
n_r	706.5	1.83740
n_C	656.3	1.84191
$n_{C'}$	643.9	1.84320
$n_{\text{He-Ne}}$	632.8	1.84441
n_D	589.3	1.84988
n_d	587.6	1.85013
n_e	546.1	1.85681
n_F	486.1	1.87020
$n_{F'}$	480.0	1.87192
n_g	435.8	1.88717
n_h	404.7	1.90227
n_i	365.0	1.93064
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
K_1	2.79518569E-001
L_1	5.93856526E-002
K_2	2.01429741E+000
L_2	1.26257440E-002
K_3	1.55073360E+000
L_3	1.00032291E+002

折射率温度系数常数 Constants of dn/dt	
D_0	-8.76E-07
D_1	1.45E-08
D_2	-5.38E-11
E_0	7.77E-07
E_1	8.10E-10
$\lambda_{TK}(\mu\text{m})$	2.91E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^\circ\text{C}$)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	1.0	2.2	2.4	3.3	3.7	5.3
-20~0	1.4	2.2	2.7	3.3	4.0	5.6
0~20	1.5	2.5	3.2	3.4	4.8	6.1
20~40	1.7	2.9	3.3	3.5	4.9	6.4
40~60	1.8	2.9	3.4	3.6	5.1	6.6
60~80	2.1	3.1	3.7	3.9	5.2	7.2
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2240	$P'_{s,t}$	0.2206
$P_{C,s}$	0.4780	$P'_{C',s}$	0.5154
$P_{d,C}$	0.2905	$P'_{d,C'}$	0.2413
$P_{e,d}$	0.2362	$P'_{e,d}$	0.2326
$P_{g,F}$	0.6001	$P'_{g,F'}$	0.5309
$P_{i,h}$	1.0032	$P'_{i,h}$	0.9878

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0142	$\Delta P_{C,s}$	0.0052
$\Delta P_{F,e}$	0.0002	$\Delta P_{g,F}$	0.0056

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	632
$T_S(^{\circ}\text{C})$	670
$T_{10}^{14.5}(^{\circ}\text{C})$	570
$T_{10}^{13}(^{\circ}\text{C})$	603
$T_{10}^{7.6}(^{\circ}\text{C})$	703
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	74
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	88
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	3
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	615
F_A	137
$E(10^7\text{Pa})$	10535
$G(10^7\text{Pa})$	4192
μ	0.257
$B(10^{-12}/\text{Pa})$	2.16

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau_{5\text{mm}}$	$\tau_{10\text{mm}}$
2400	0.860	0.740
2200	0.956	0.914
2000	0.985	0.971
1800	0.996	0.992
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	0.998	0.997
700	0.998	0.996
650	0.997	0.994
600	0.996	0.992
550	0.993	0.986
500	0.985	0.971
480	0.980	0.960
460	0.973	0.946
440	0.961	0.923
420	0.938	0.880
400	0.890	0.790
390	0.840	0.700
380	0.730	0.530
370	0.490	0.240
360	0.140	0.020
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	
λ_{70}/λ_5	415/360

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.88

退火增值系数 ECFA.	
β	180

备注 Remarks	

H-ZLaF78A	901371	n _d = 1.90069	v _d = 37.05	n _F -n _C = 0.02431
		n _e = 1.90646	v _e = 36.80	n _F -n _{C'} = 0.02463

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.85041
n _{1970.1}	1970.1	1.85730
n _{1529.6}	1529.6	1.86510
n _{1060.0}	1060.0	1.87472
n _t	1014.0	1.87598
n _s	852.1	1.87598
n _r	706.5	1.88956
n _C	656.3	1.89353
n _{C'}	643.9	1.89465
n _{He-Ne}	632.8	1.89571
n _D	589.3	1.90048
n _d	587.6	1.90069
n _e	546.1	1.90646
n _F	486.1	1.91784
n _{F'}	480.0	1.91928
n _g	435.8	1.93189
n _h	404.7	1.94400
n _i	365.0	1.96572
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	2.99636528E-001
L ₁	4.70546260E-002
K ₂	2.19452718E+000
L ₂	1.15403970E-002
K ₃	1.53572385E+000
L ₃	1.12608928E+002

折射率温度系数常数 Constants of dn/dt	
D ₀	-4.39E-07
D ₁	1.46E-08
D ₂	-2.76E-11
E ₀	8.87E-07
E ₁	7.53E-10
λ _{TK} (μm)	2.20E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	1.7	2.4	2.7	3.0	4.1	4.9
-40~-20	1.7	2.7	3.1	3.5	4.3	5.3
-20~0	1.8	2.8	3.2	3.7	4.6	5.5
0~20	1.9	2.9	3.5	3.9	4.9	5.7
20~40	2.0	3.3	3.7	4.1	4.9	6.0
40~60	2.4	3.4	3.9	4.3	5.2	6.4
60~80	2.5	3.6	4.2	4.5	5.6	6.9
80~100	2.6	3.8	4.3	4.6	5.8	7.1
100~120	2.7	4.0	4.4	4.8	6.1	7.3
120~140	2.9	4.2	4.6	5.0	6.2	7.5

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2311	P' _{s,t}	0.2280
P _{C,s}	0.4907	P' _{C',s}	0.5300
P _{d,C}	0.2947	P' _{d,C'}	0.2452
P _{e,d}	0.2372	P' _{e,d}	0.2341
P _{g,F}	0.5780	P' _{g,F'}	0.5118
P _{i,h}	0.8933	P' _{i,h}	0.8817

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0010	ΔP _{C,s}	0.0014
ΔP _{F,e}	-0.0012	ΔP _{g,F}	-0.0046

热性质 Thermal Properties	
T _g (℃)	732
T _g (℃)	782
T ₁₀ ^{14.5} (℃)	680
T ₁₀ ¹³ (℃)	731
T ₁₀ ^{7.6} (℃)	833
α _{-30/70℃} (10 ⁻⁷ /K)	78
α _{100/300℃} (10 ⁻⁷ /K)	90
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	1
CR	1
RC(S)	1
RA(S)	1

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	716
F _A	101
E(10 ⁷ Pa)	12650
G(10 ⁷ Pa)	4853
μ	0.303
B(10 ⁻¹² /Pa)	0.95

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.915	0.837
2200	0.975	0.951
2000	0.990	0.980
1800	0.997	0.994
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
700	0.998	0.996
650	0.998	0.996
600	0.997	0.994
550	0.997	0.994
500	0.992	0.984
480	0.987	0.975
460	0.981	0.962
440	0.972	0.945
420	0.958	0.918
400	0.928	0.862
390	0.898	0.806
380	0.849	0.721
370	0.764	0.583
360	0.605	0.366
350	0.327	0.107
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	
λ ₇₀ /λ ₅	395/350

其他性质 Other Properties	
ρ(g/cm ³)	5.05

退火增值系数 ECFA.	
β	115

备注 Remarks	

H-ZLaF89S	954323	n _d = 1.95375	v _d = 32.31	n _F -n _C = 0.02952
		n _e = 1.96074	v _e = 32.07	n _F -n _{C'} = 0.02995

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.89702
n _{1970.1}	1970.1	1.90415
n _{1529.6}	1529.6	1.91239
n _{1060.0}	1060.0	1.92304
n _t	1014.0	1.92448
n _s	852.1	1.92448
n _r	706.5	1.94041
n _C	656.3	1.94514
n _{C'}	643.9	1.94648
n _{He-Ne}	632.8	1.94775
n _D	589.3	1.95349
n _d	587.6	1.95375
n _e	546.1	1.96074
n _F	486.1	1.97466
n _{F'}	480.0	1.97644
n _g	435.8	1.99209
n _h	404.7	2.00736
n _i	365.0	2.03538
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	2.33250033E+000
L ₁	1.27519393E-002
K ₂	3.38027439E-001
L ₂	5.35631807E-002
K ₃	1.63568735E+000
L ₃	1.14949418E+002

折射率温度系数常数 Constants of dn/dt	
D ₀	-4.45E-07
D ₁	1.40E-08
D ₂	-3.45E-11
E ₀	9.44E-07
E ₁	1.04E-09
λ _{TK} (μm)	2.53E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	1.9	2.8	3.3	3.8	4.6	6.3
-20~0	1.9	3.0	3.6	4.0	5.2	6.6
0~20	1.9	3.5	3.9	4.3	5.6	6.8
20~40	2.2	3.6	4.0	4.6	5.9	7.3
40~60	2.6	3.8	4.3	4.7	6.3	7.8
60~80	2.8	3.9	4.4	5.1	6.4	8.1
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2207	P' _{s,t}	0.2175
P _{C,s}	0.4790	P' _{C',s}	0.5170
P _{d,C}	0.2918	P' _{d,C'}	0.2426
P _{e,d}	0.2367	P' _{e,d}	0.2332
P _{g,F}	0.5906	P' _{g,F'}	0.5227
P _{i,h}	0.9489	P' _{i,h}	0.9352

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0012	ΔP _{C,s}	0.0009
ΔP _{F,e}	-0.0004	ΔP _{g,F}	-0.0001

热性质 Thermal Properties	
T _g (℃)	708
T _g (℃)	745
T ₁₀ ^{14.5} (℃)	649
T ₁₀ ¹³ (℃)	685
T ₁₀ ^{7.6} (℃)	800
α _{-30/70℃} (10 ⁻⁷ /K)	72
α _{100/300℃} (10 ⁻⁷ /K)	88
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	1
CR	1
RC(S)	1
RA(S)	1

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	698
F _A	107
E(10 ⁷ Pa)	13043
G(10 ⁷ Pa)	4998
μ	0.305
B(10 ⁻¹² /Pa)	0.93

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.931	0.866
2200	0.980	0.960
2000	0.991	0.983
1800	0.998	0.996
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	0.998	0.996
700	0.998	0.996
650	0.998	0.996
600	0.998	0.996
550	0.996	0.993
500	0.988	0.977
480	0.981	0.963
460	0.972	0.944
440	0.956	0.914
420	0.927	0.860
400	0.868	0.754
390	0.813	0.661
380	0.725	0.526
370	0.574	0.330
360	0.318	0.101
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	
λ ₇₀ /λ ₅	420/360

其他性质 Other Properties	
ρ(g/cm ³)	5.1

退火增值系数 ECFA.	
β	130

备注 Remarks	

H-ZLaF90S	001254	n _d = 2.00069	v _d = 25.43	n _F -n _C = 0.03936
		n _e = 2.00996	v _e = 25.22	n _F -n _{C'} = 0.04004

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.93209
n _{1970.1}	1970.1	1.93973
n _{1529.6}	1529.6	1.94885
n _{1060.0}	1060.0	1.96140
n _t	1014.0	1.96317
n _s	852.1	1.96317
n _r	706.5	1.98328
n _C	656.3	1.98940
n _{C'}	643.9	1.99116
n _{He-Ne}	632.8	1.99281
n _D	589.3	2.00035
n _d	587.6	2.00069
n _e	546.1	2.00996
n _F	486.1	2.02876
n _{F'}	480.0	2.03120
n _g	435.8	2.05293
n _h	404.7	2.07472
n _i	365.0	
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	4.94167183E-001
L ₁	6.02358038E-002
K ₂	2.31375143E+000
L ₂	1.37149187E-002
K ₃	2.27929870E+000
L ₃	1.48088436E+002

折射率温度系数常数 Constants of dn/dt	
D ₀	-2.20E-06
D ₁	1.40E-08
D ₂	-1.91E-11
E ₀	1.04E-06
E ₁	1.38E-09
λ _{TK} (μm)	2.90E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	0.5	1.7	1.9	2.8	4.4	6.0
-40~-20	0.7	2.1	2.3	2.9	4.8	6.4
-20~0	0.8	2.2	2.9	3.3	5.3	7.2
0~20	1.0	2.3	3.2	3.8	5.5	7.8
20~40	1.2	2.7	3.5	4.3	6.0	8.4
40~60	1.3	3.0	3.7	4.6	6.6	9.0
60~80	1.4	3.2	3.9	4.7	6.8	9.4
80~100	1.6	3.5	4.1	5.1	7.1	9.8
100~120	2.1	4.0	4.7	5.6	7.7	10.5
120~140	2.5	4.5	5.4	6.5	8.5	11.4

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2061	P' _{s,t}	0.2026
P _{C,s}	0.4605	P' _{C',s}	0.4965
P _{d,C}	0.2868	P' _{d,C'}	0.2381
P _{e,d}	0.2356	P' _{e,d}	0.2316
P _{g,F}	0.6141	P' _{g,F'}	0.5428
P _{i,h}		P' _{i,h}	

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0006	ΔP _{C,s}	-0.0013
ΔP _{F,e}	0.0019	ΔP _{g,F}	0.0117

热性质 Thermal Properties	
T _g (℃)	683
T _g (℃)	724
T ₁₀ ^{14.5} (℃)	634
T ₁₀ ¹³ (℃)	668
T ₁₀ ^{7.6} (℃)	785
α _{-30/70℃} (10 ⁻⁷ /K)	70
α _{100/300℃} (10 ⁻⁷ /K)	87
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	1
CR	
RC(S)	1
RA(S)	1

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	625
F _A	124
E(10 ⁷ Pa)	12348
G(10 ⁷ Pa)	4756
μ	0.298
B(10 ⁻¹² /Pa)	

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.943	0.889
2200	0.982	0.964
2000	0.993	0.985
1800	0.997	0.995
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
700	0.998	0.996
650	0.996	0.993
600	0.995	0.990
550	0.991	0.982
500	0.977	0.955
480	0.966	0.934
460	0.953	0.908
440	0.925	0.856
420	0.872	0.761
400	0.764	0.583
390	0.658	0.433
380	0.466	0.217
370	0.184	0.034
360		
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	
λ ₇₀ /λ ₅	445/370

其他性质 Other Properties	
ρ(g/cm ³)	4.74

退火增值系数 ECFA.	
β	220

备注 Remarks	

H-ZLaF92S	003283	n _d = 2.00330	v _d = 28.32	n _F -n _C = 0.03543
		n _e = 2.01167	v _e = 28.10	n _F -n _{C'} = 0.03600

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.93900
n _{1970.1}	1970.1	1.94652
n _{1529.6}	1529.6	1.95538
n _{1060.0}	1060.0	1.96726
n _t	1014.0	1.96891
n _s	852.1	1.96891
n _r	706.5	1.98747
n _C	656.3	1.99306
n _{C'}	643.9	1.99465
n _{He-Ne}	632.8	1.99616
n _D	589.3	2.00299
n _d	587.6	2.00330
n _e	546.1	2.01167
n _F	486.1	2.02849
n _{F'}	480.0	2.03065
n _g	435.8	2.04986
n _h	404.7	2.06889
n _i	365.0	2.10467
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	1.86762237E+000
L ₁	1.23078620E+002
K ₂	3.75569196E-001
L ₂	5.96643730E-002
K ₃	2.45933103E+000
L ₃	1.41481580E-002

折射率温度系数常数 Constants of dn/dt	
D ₀	-5.53E-07
D ₁	1.56E-08
D ₂	-5.25E-11
E ₀	1.00E-06
E ₁	1.17E-09
λ _{TK} (μm)	2.75E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	1.4	2.6	3.2	3.7	5.0	6.6
-40~-20	1.4	2.7	3.4	3.9	5.2	7.0
-20~0	1.8	3.2	3.7	4.1	5.6	7.2
0~20	2.0	3.5	4.0	4.6	6.1	8.0
20~40	2.0	3.9	4.4	5.1	7.1	9.0
40~60	2.5	4.1	4.8	5.4	7.2	9.1
60~80	2.7	4.2	4.9	5.5	7.3	9.3
80~100	2.9	4.2	5.0	5.6	7.5	9.6
100~120	3.0	4.5	5.3	6.0	7.9	10.0
120~140	2.8	4.5	5.3	6.1	8.1	10.3

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2124	P' _{s,t}	0.2091
P _{C,s}	0.4689	P' _{C',s}	0.5059
P _{d,C}	0.2891	P' _{d,C'}	0.2402
P _{e,d}	0.2361	P' _{e,d}	0.2324
P _{g,F}	0.6032	P' _{g,F'}	0.5335
P _{i,h}	1.0099	P' _{i,h}	0.9939

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0017	ΔP _{C,s}	0.0003
ΔP _{F,e}	0.0006	ΔP _{g,F}	0.0057

热性质 Thermal Properties	
T _g (℃)	703
T _S (℃)	747
T ₁₀ ^{14.5} (℃)	658
T ₁₀ ¹³ (℃)	693
T ₁₀ ^{7.6} (℃)	800
α _{-30/70℃} (10 ⁻⁷ /K)	69
α _{100/300℃} (10 ⁻⁷ /K)	87
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	1
CR	1
RC(S)	1
RA(S)	1

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	697
F _A	96
E(10 ⁷ Pa)	13318
G(10 ⁷ Pa)	5106
μ	0.304
B(10 ⁻¹² /Pa)	0.96

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.939	0.882
2200	0.981	0.963
2000	0.991	0.983
1800	0.997	0.993
1600	0.998	0.996
1400	0.998	0.997
1200	0.998	0.997
1060	0.998	0.996
1000	0.998	0.996
950	0.998	0.995
900	0.997	0.995
850	0.997	0.995
800	0.993	0.987
700	0.992	0.984
650	0.990	0.980
600	0.988	0.976
550	0.979	0.959
500	0.956	0.913
480	0.939	0.882
460	0.918	0.843
440	0.885	0.784
420	0.830	0.689
400	0.722	0.521
390	0.629	0.396
380	0.482	0.232
370	0.257	0.066
360	0.095	0.009
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	
λ ₇₀ /λ ₅	445/370

其他性质 Other Properties	
ρ(g/cm ³)	5.02

退火增值系数 ECFA.	
β	

备注 Remarks	

H-ZF7S	805255	$n_d=1.80518$	$v_d=25.46$	$n_F-n_C=0.03163$
		$n_e=1.81263$	$v_e=25.25$	$n_F-n_C=0.03218$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.74966
$n_{1970.1}$	1970.1	1.75593
$n_{1529.6}$	1529.6	1.76338
$n_{1060.0}$	1060.0	1.77355
n_t	1014.0	1.77498
n_s	852.1	1.77498
n_r	706.5	1.79118
n_C	656.3	1.79611
$n_{C'}$	643.9	1.79752
$n_{\text{He-Ne}}$	632.8	1.79885
n_D	589.3	1.80491
n_d	587.6	1.80518
n_e	546.1	1.81263
n_F	486.1	1.82774
$n_{F'}$	480.0	1.82970
n_g	435.8	1.84719
n_h	404.7	1.86479
n_i	365.0	1.89867
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
K_1	1.65846092E+000
L_1	1.44874699E+002
K_2	2.98796445E-001
L_2	6.35424599E-002
K_3	1.81848340E+000
L_3	1.41908346E-002

折射率温度系数常数 Constants of dn/dt	
D_0	-7.91E-06
D_1	1.24E-08
D_2	-3.12E-11
E_0	1.09E-06
E_1	1.48E-09
$\lambda_{TK}(\mu\text{m})$	2.81E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	-2.3	-1.8	-0.8	-0.6	0.3	1.8
-40~-20	-3.1	-1.7	-1.4	-0.8	0.6	1.7
-20~0	-2.7	-1.5	-1.0	-0.6	0.8	2.6
0~20	-2.5	-1.1	-0.9	-0.4	0.9	2.5
20~40	-2.4	-1.1	-0.7	0.0	1.6	3.2
40~60	-2.3	-0.9	-0.3	0.1	1.9	3.8
60~80	-2.3	-0.8	-0.3	0.5	2.1	4.0
80~100	-2.0	-0.7	-0.1	0.8	2.3	4.5
100~120	-2.3	-0.4	0.1	0.5	2.2	4.3
120~140	-1.6	-0.2	0.2	1.2	3.2	5.2

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2069	$P'_{s,t}$	0.2034
$P_{C,s}$	0.4610	$P'_{C',s}$	0.4970
$P_{d,C}$	0.2868	$P'_{d,C'}$	0.2381
$P_{e,d}$	0.2356	$P'_{e,d}$	0.2316
$P_{g,F}$	0.6151	$P'_{g,F'}$	0.5437
$P_{i,h}$	1.0713	$P'_{i,h}$	1.0530

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0018	$\Delta P_{C,s}$	-0.0009
$\Delta P_{F,e}$	0.0020	$\Delta P_{g,F}$	0.0127

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	580
$T_g(^{\circ}\text{C})$	615
$T_{10}^{14.5}(^{\circ}\text{C})$	530
$T_{10}^{13}(^{\circ}\text{C})$	558
$T_{10}^{7.6}(^{\circ}\text{C})$	678
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	90
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	113
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	1
CR	1
RC(S)	1
RA(S)	1

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	513
F_A	192
$E(10^7\text{Pa})$	8994
$G(10^7\text{Pa})$	3555
μ	0.265
$B(10^{-12}/\text{Pa})$	2.65

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.924	0.854
2200	0.958	0.917
2000	0.976	0.953
1800	0.986	0.973
1600	0.996	0.992
1400	0.998	0.996
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	0.998	0.996
700	0.998	0.996
650	0.997	0.995
600	0.997	0.995
550	0.996	0.993
500	0.992	0.985
480	0.991	0.982
460	0.988	0.976
440	0.982	0.965
420	0.970	0.940
400	0.936	0.877
390	0.900	0.810
380	0.804	0.647
370	0.556	0.309
360	0.145	0.021
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	425/365
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.35

退火增值系数 ECFA.	
β	215

备注 Remarks	

H-ZF13S	785257	$n_d=1.78472$	$v_d=25.72$	$n_F-n_C=0.03051$
		$n_e=1.79191$	$v_e=25.51$	$n_F-n_C=0.03104$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.72972
$n_{1970.1}$	1970.1	1.73624
$n_{1529.6}$	1529.6	1.74391
$n_{1060.0}$	1060.0	1.75409
n_t	1014.0	1.75549
n_s	852.1	1.75549
n_r	706.5	1.77122
n_C	656.3	1.77597
$n_{C'}$	643.9	1.77733
$n_{\text{He-Ne}}$	632.8	1.77861
n_D	589.3	1.78446
n_d	587.6	1.78472
n_e	546.1	1.79191
n_F	486.1	1.80648
$n_{F'}$	480.0	1.80837
n_g	435.8	1.82527
n_h	404.7	1.84227
n_i	365.0	
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
K_1	1.73521591E+000
L_1	1.31087904E-002
K_2	3.16277446E-001
L_2	6.21421663E-002
K_3	2.16384634E+000
L_3	1.78845558E+002

折射率温度系数常数 Constants of dn/dt	
D_0	-5.40E-06
D_1	1.34E-08
D_2	-3.56E-11
E_0	1.01E-06
E_1	1.25E-09
$\lambda_{TK}(\mu\text{m})$	2.91E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	-1.7	-0.5	-0.1	0.3	1.3	2.8
-40~-20	-1.4	-0.1	0.2	0.7	2.0	3.5
-20~0	-1.0	0.0	0.4	1.0	2.3	3.8
0~20	-0.9	0.1	0.6	1.2	2.5	4.1
20~40	-0.7	0.3	0.8	1.5	2.8	4.6
40~60	-0.7	0.4	1.0	1.6	3.1	4.8
60~80	-0.7	0.5	1.4	1.8	3.3	5.6
80~100	-0.7	0.9	1.5	1.8	3.4	5.6
100~120	-0.7	1.0	1.5	2.2	4.1	6.2
120~140	-0.6	1.1	1.6	2.4	4.2	6.3

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2091	$P'_{s,t}$	0.2055
$P_{C,s}$	0.4622	$P'_{C',s}$	0.4981
$P_{d,C}$	0.2868	$P'_{d,C'}$	0.2381
$P_{e,d}$	0.2355	$P'_{e,d}$	0.2315
$P_{g,F}$	0.6157	$P'_{g,F'}$	0.5443
$P_{i,h}$		$P'_{i,h}$	

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0039	$\Delta P_{C,s}$	-0.0003
$\Delta P_{F,e}$	0.0022	$\Delta P_{g,F}$	0.0138

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	610
$T_S(^{\circ}\text{C})$	644
$T_{10}^{14.5}(^{\circ}\text{C})$	556
$T_{10}^{13}(^{\circ}\text{C})$	593
$T_{10}^{7.6}(^{\circ}\text{C})$	707
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	94
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	106
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	1
CR	1
RC(S)	1
RA(S)	1

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	544
F_A	187
$E(10^7\text{Pa})$	9196
$G(10^7\text{Pa})$	3675
μ	0.251
$B(10^{-12}/\text{Pa})$	2.73

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.953	0.909
2200	0.972	0.944
2000	0.987	0.974
1800	0.993	0.987
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
700	0.998	0.996
650	0.997	0.995
600	0.997	0.994
550	0.996	0.992
500	0.991	0.983
480	0.989	0.978
460	0.985	0.971
440	0.978	0.956
420	0.959	0.919
400	0.900	0.810
390	0.810	0.650
380	0.620	0.380
370	0.270	0.070
360		
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	425/370
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.25

退火增值系数 ECFA.	
β	240

备注 Remarks	

H-ZF52S	847238	$n_d=1.84666$	$v_d=23.78$	$n_F-n_C=0.03560$
		$n_e=1.85504$	$v_e=23.60$	$n_F-n_{C'}=0.03624$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.78523
$n_{1970.1}$	1970.1	1.79203
$n_{1529.6}$	1529.6	1.80018
$n_{1060.0}$	1060.0	1.81140
n_t	1014.0	1.81298
n_s	852.1	1.81298
n_r	706.5	1.83099
n_C	656.3	1.83650
$n_{C'}$	643.9	1.83807
$n_{\text{He-Ne}}$	632.8	1.83956
n_D	589.3	1.84635
n_d	587.6	1.84666
n_e	546.1	1.85504
n_F	486.1	1.87209
$n_{F'}$	480.0	1.87431
n_g	435.8	1.89419
n_h	404.7	1.91428
n_i	365.0	
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
K_1	4.09982615E-001
L_1	6.21421199E-002
K_2	2.37517176E+000
L_2	1.85055134E+002
K_3	1.83913582E+000
L_3	1.36093459E-002

折射率温度系数常数 Constants of dn/dt	
D_0	-6.18E-06
D_1	1.63E-08
D_2	-4.50E-11
E_0	1.12E-06
E_1	1.19E-09
$\lambda_{TK}(\mu\text{m})$	2.91E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^\circ\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	-2.1	-0.7	-0.3	0.1	1.6	3.1
-40~-20	-2.0	-0.7	-0.1	0.4	1.9	3.3
-20~0	-1.9	-0.5	0.0	0.6	2.0	4.1
0~20	-1.9	-0.4	0.1	0.7	2.5	4.5
20~40	-1.4	0.1	0.6	1.5	3.0	5.2
40~60	-1.1	0.3	1.0	1.8	3.4	5.5
60~80	-1.0	0.6	1.0	2.0	3.5	5.8
80~100	-0.9	0.6	1.2	2.1	3.9	6.4
100~120	-0.9	0.7	1.4	2.1	4.1	7.0
120~140	-0.8	0.7	1.5	2.2	4.5	7.3

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2039	$P'_{s,t}$	0.2003
$P_{C,s}$	0.4568	$P'_{C',s}$	0.4922
$P_{d,C}$	0.2855	$P'_{d,C'}$	0.2370
$P_{e,d}$	0.2353	$P'_{e,d}$	0.2312
$P_{g,F}$	0.6207	$P'_{g,F'}$	0.5485
$P_{i,h}$		$P'_{i,h}$	

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0023	$\Delta P_{C,s}$	-0.0012
$\Delta P_{F,e}$	0.0026	$\Delta P_{g,F}$	0.0155

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	626
$T_g(^{\circ}\text{C})$	653
$T_{10}^{14.5}(^{\circ}\text{C})$	572
$T_{10}^{13}(^{\circ}\text{C})$	605
$T_{10}^{7.6}(^{\circ}\text{C})$	711
$\alpha_{30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	88
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	108
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	1
CR	1
RC(S)	2
RA(S)	1

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	555
F_A	185
$E(10^7\text{Pa})$	9478
$G(10^7\text{Pa})$	3742
μ	0.266
$B(10^{-12}/\text{Pa})$	2.71

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau_{5\text{mm}}$	$\tau_{10\text{mm}}$
2400	0.943	0.890
2200	0.969	0.939
2000	0.983	0.966
1800	0.989	0.979
1600	0.996	0.992
1400	0.997	0.995
1200	0.999	0.998
1060	0.998	0.997
1000	0.998	0.997
950	0.998	0.997
900	0.998	0.997
850	0.998	0.997
800	0.996	0.994
700	0.995	0.991
650	0.995	0.990
600	0.995	0.991
550	0.993	0.987
500	0.986	0.973
480	0.982	0.964
460	0.976	0.953
440	0.965	0.931
420	0.947	0.896
400	0.888	0.789
390	0.813	0.661
380	0.643	0.413
370	0.300	0.090
360		
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	
λ_{70}/λ_5	410/370

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.51

退火增值系数 ECFA.	
β	250

备注 Remarks	

H-ZF62S	923209	n _d = 1.92286	v _d = 20.88	n _F -n _C = 0.04420
		n _e = 1.93322	v _e = 20.70	n _F -n _{C'} = 0.04508

折射率 Refractive Index		
	λ(nm)	
n _{2325.4}	2325.4	1.84888
n _{1970.1}	1970.1	1.85699
n _{1529.6}	1529.6	1.86668
n _{1060.0}	1060.0	1.88006
n _t	1014.0	1.88195
n _s	852.1	1.88195
n _r	706.5	1.90369
n _C	656.3	1.91039
n _{C'}	643.9	1.91232
n _{He-Ne}	632.8	1.91414
n _D	589.3	1.92248
n _d	587.6	1.92286
n _e	546.1	1.93322
n _F	486.1	1.95459
n _{F'}	480.0	1.95740
n _g	435.8	1.98287
n _h	404.7	2.00927
n _i	365.0	
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	2.55246796E+000
L ₁	1.62450683E+002
K ₂	4.65681607E-001
L ₂	6.95600810E-002
K ₃	2.02894680E+000
L ₃	1.47711380E-002

折射率温度系数常数 Constants of dn/dt	
D ₀	-6.75E-06
D ₁	1.69E-08
D ₂	-4.10E-11
E ₀	9.81E-07
E ₁	1.32E-09
λ _{TK} (μm)	3.22E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	-2.8	-1.7	-1.4	-0.7	0.9	2.8
-40~-20	-2.6	-1.5	-1.1	-0.5	1.4	3.5
-20~0	-2.5	-1.3	-0.8	-0.1	1.8	4.1
0~20	-2.4	-1.2	-0.4	0.3	2.1	4.9
20~40	-2.2	-0.5	0.1	0.8	2.8	5.6
40~60	-1.9	-0.2	0.6	1.4	3.5	6.4
60~80	-1.5	0.1	0.9	1.7	4.0	7.1
80~100	-1.3	0.2	0.9	1.9	4.1	7.4
100~120	-1.1	0.5	1.1	2.0	4.6	7.8
120~140	-1.0	0.6	1.5	2.5	5.0	8.4

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.1973	P' _{s,t}	0.1935
P _{C,s}	0.4462	P' _{C',s}	0.4802
P _{d,C}	0.2821	P' _{d,C'}	0.2338
P _{e,d}	0.2345	P' _{e,d}	0.2299
P _{g,F}	0.6399	P' _{g,F'}	0.5651
P _{i,h}		P' _{i,h}	

异常色散 Abnormal Dispersions			
ΔP _{C,t}	-0.0011	ΔP _{C,s}	-0.0049
ΔP _{F,e}	0.0053	ΔP _{g,F}	0.0298

热性质 Thermal Properties	
T _g (℃)	720
T _S (℃)	751
T ₁₀ ^{14.5} (℃)	667
T ₁₀ ¹³ (℃)	699
T ₁₀ ^{7.6} (℃)	806
α _{-30/70℃} (10 ⁻⁷ /K)	64
α _{100/300℃} (10 ⁻⁷ /K)	77
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	1
CR	1
RC(S)	1
RA(S)	1

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	475
F _A	200
E(10 ⁷ Pa)	9443
G(10 ⁷ Pa)	3734
μ	0.264
B(10 ⁻¹² /Pa)	2.77

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.969	0.938
2200	0.981	0.962
2000	0.990	0.979
1800	0.994	0.987
1600	0.997	0.995
1400	0.999	0.997
1200	0.999	0.998
1060	0.999	0.997
1000	0.998	0.996
950	0.998	0.996
900	0.997	0.994
850	0.997	0.994
800	0.996	0.992
700	0.995	0.990
650	0.993	0.986
600	0.992	0.984
550	0.986	0.973
500	0.972	0.944
480	0.964	0.929
460	0.953	0.908
440	0.933	0.871
420	0.894	0.799
400	0.732	0.536
390	0.459	0.211
380		
370		
360		
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	
λ ₇₀ /λ ₅	430/385

其他性质 Other Properties	
ρ(g/cm ³)	4.01

退火增值系数 ECFA.	
β	251

备注 Remarks	

H-ZF71S	808227	$n_d=1.80810$	$v_d=22.70$	$n_F-n_C=0.03560$
		$n_e=1.81646$	$v_e=22.51$	$n_F-n_{C'}=0.03627$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.74447
$n_{1970.1}$	1970.1	1.75218
$n_{1529.6}$	1529.6	1.76116
$n_{1060.0}$	1060.0	1.77290
n_t	1014.0	1.77451
n_s	852.1	1.77451
n_r	706.5	1.79251
n_C	656.3	1.79798
$n_{C'}$	643.9	1.79955
$n_{\text{He-Ne}}$	632.8	1.80103
n_D	589.3	1.80780
n_d	587.6	1.80810
n_e	546.1	1.81646
n_F	486.1	1.83359
$n_{F'}$	480.0	1.83582
n_g	435.8	1.85600
n_h	404.7	1.87663
n_i	365.0	
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
K_1	4.06804868E-001
L_1	6.45152130E-002
K_2	1.70831097E+000
L_2	1.27703237E-002
K_3	2.36137303E+000
L_3	1.63275585E+002

折射率温度系数常数 Constants of dn/dt	
D_0	-9.66E-06
D_1	1.15E-08
D_2	-5.06E-11
E_0	9.75E-07
E_1	1.26E-09
$\lambda_{TK}(\mu\text{m})$	3.13E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^\circ\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	-3.9	-2.9	-2.6	-2.1	-0.8	0.7
-40~-20	-3.9	-2.8	-2.4	-1.8	-0.5	1.2
-20~0	-3.8	-2.7	-2.2	-1.6	-0.3	1.7
0~20	-3.7	-2.5	-2.0	-1.5	0.2	2.1
20~40	-3.6	-2.4	-1.9	-1.2	0.5	2.5
40~60	-3.5	-2.3	-1.7	-1.0	0.6	3.0
60~80	-3.3	-2.1	-1.4	-0.9	1.1	3.4
80~100	-3.4	-2.1	-1.4	-0.9	1.1	3.5
100~120	-3.6	-2.2	-1.4	-0.9	1.1	3.9
120~140	-4.0	-2.3	-1.7	-0.9	1.1	4.0

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2050	$P'_{s,t}$	0.2012
$P_{C,s}$	0.4545	$P'_{C',s}$	0.4893
$P_{d,C}$	0.2842	$P'_{d,C'}$	0.2357
$P_{e,d}$	0.2349	$P'_{e,d}$	0.2306
$P_{g,F}$	0.6295	$P'_{g,F'}$	0.5562
$P_{i,h}$		$P'_{i,h}$	

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0063	$\Delta P_{C,s}$	-0.0009
$\Delta P_{F,e}$	0.0038	$\Delta P_{g,F}$	0.0224

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	566
$T_g(^{\circ}\text{C})$	611
$T_{10}^{14.5}(^{\circ}\text{C})$	522
$T_{10}^{13}(^{\circ}\text{C})$	555
$T_{10}^{7.6}(^{\circ}\text{C})$	663
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	93
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	105
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	1
CR	1
RC(S)	1
RA(S)	1

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	428
F_A	275
$E(10^7\text{Pa})$	8537
$G(10^7\text{Pa})$	3398
μ	0.256
$B(10^{-12}/\text{Pa})$	3.48

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.936	0.876
2200	0.966	0.934
2000	0.987	0.975
1800	0.993	0.986
1600	0.997	0.994
1400	0.998	0.996
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	0.998	0.996
700	0.997	0.995
650	0.997	0.994
600	0.996	0.993
550	0.994	0.989
500	0.987	0.974
480	0.983	0.967
460	0.978	0.957
440	0.970	0.940
420	0.955	0.912
400	0.907	0.823
390	0.815	0.665
380	0.547	0.299
370	0.114	0.013
360		
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	450/370
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.30

退火增值系数 ECFA.	
β	250

备注 Remarks	

H-ZF72S	923189	$n_d=1.92286$	$v_d=18.90$	$n_F-n_C=0.04884$
		$n_e=1.93429$	$v_e=18.74$	$n_F-n_C'=0.04986$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.84205
$n_{1970.1}$	1970.1	1.85092
$n_{1529.6}$	1529.6	1.86150
$n_{1060.0}$	1060.0	1.87606
n_t	1014.0	1.87812
n_s	852.1	1.87812
n_r	706.5	1.90183
n_C	656.3	1.90917
$n_{C'}$	643.9	1.91128
$n_{\text{He-Ne}}$	632.8	1.91328
n_D	589.3	1.92245
n_d	587.6	1.92286
n_e	546.1	1.93429
n_F	486.1	1.95800
$n_{F'}$	480.0	1.96114
n_g	435.8	1.98974
n_h	404.7	2.01978
n_i	365.0	
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
K_1	4.70478653E-001
L_1	7.36024509E-002
K_2	2.55040233E+000
L_2	1.49306621E+002
K_3	2.00593441E+000
L_3	1.62999226E-002

折射率温度系数常数 Constants of dn/dt	
D_0	-5.63E-06
D_1	1.59E-08
D_2	-4.96E-11
E_0	1.13E-06
E_1	1.73E-09
$\lambda_{TK}(\mu\text{m})$	3.28E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^\circ\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	-2.5	-0.8	-0.2	0.5	2.2	5.2
-40~-20	-2.1	-0.5	0.2	0.8	2.8	5.8
-20~0	-1.7	-0.2	0.6	1.5	3.6	6.4
0~20	-1.2	0.2	0.9	1.8	4.1	7.1
20~40	-0.8	0.6	1.4	2.1	4.8	8.4
40~60	-0.5	0.8	1.7	2.6	5.3	9.1
60~80	-1.0	1.0	2.0	3.1	5.9	9.8
80~100	-0.7	1.3	2.2	3.3	6.4	10.5
100~120	-0.9	1.6	2.4	3.6	6.7	11.0
120~140	-0.5	1.8	2.7	4.0	7.1	11.6

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.1945	$P'_{s,t}$	0.1905
$P_{C,s}$	0.4413	$P'_{C',s}$	0.4746
$P_{d,C}$	0.2804	$P'_{d,C'}$	0.2323
$P_{e,d}$	0.2340	$P'_{e,d}$	0.2293
$P_{g,F}$	0.6499	$P'_{g,F'}$	0.5738
$P_{i,h}$		$P'_{i,h}$	

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0005	$\Delta P_{C,s}$	-0.0051
$\Delta P_{F,e}$	0.0064	$\Delta P_{g,F}$	0.0363

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	667
$T_g(^{\circ}\text{C})$	697
$T_{10}^{14.5}(^{\circ}\text{C})$	614
$T_{10}^{13}(^{\circ}\text{C})$	649
$T_{10}^{7.6}(^{\circ}\text{C})$	749
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	67
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	84
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	1
CR	1
RC(S)	1
RA(S)	1

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	484
F_A	193
$E(10^7\text{Pa})$	10223
$G(10^7\text{Pa})$	4012
μ	0.274
$B(10^{-12}/\text{Pa})$	3.19

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau_{5\text{mm}}$	$\tau_{10\text{mm}}$
2400	0.963	0.927
2200	0.978	0.956
2000	0.988	0.976
1800	0.993	0.986
1600	0.997	0.995
1400	0.999	0.998
1200	0.999	0.998
1060	0.999	0.998
1000	0.998	0.997
950	0.998	0.997
900	0.998	0.997
850	0.998	0.997
800	0.998	0.996
700	0.997	0.995
650	0.997	0.994
600	0.996	0.992
550	0.991	0.982
500	0.977	0.955
480	0.967	0.935
460	0.950	0.903
440	0.921	0.849
420	0.860	0.740
400	0.594	0.353
390	0.230	0.053
380		
370		
360		
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	
λ_{70}/λ_5	435/390

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.57

退火增值系数 ECFA.	
β	280

备注 Remarks	

H-ZF88S	946179	$n_d=1.94595$	$v_d=17.94$	$n_F-n_C=0.05272$
		$n_e=1.95828$	$v_e=17.80$	$n_F-n_C'=0.05385$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.85934
$n_{1970.1}$	1970.1	1.86890
$n_{1529.6}$	1529.6	1.88022
$n_{1060.0}$	1060.0	1.89575
n_t	1014.0	1.89795
n_s	852.1	1.89795
n_r	706.5	1.92334
n_C	656.3	1.93122
$n_{C'}$	643.9	1.93349
$n_{\text{He-Ne}}$	632.8	1.93563
n_D	589.3	1.94550
n_d	587.6	1.94595
n_e	546.1	1.95828
n_F	486.1	1.98394
$n_{F'}$	480.0	1.98734
n_g	435.8	2.01848
n_h	404.7	2.05140
n_i	365.0	
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
K_1	2.04275349E+000
L_1	1.69742976E-002
K_2	1.98276153E+000
L_2	1.09068151E+002
K_3	5.04267829E-001
L_3	7.51710710E-002

折射率温度系数常数 Constants of dn/dt	
D_0	-3.58E-06
D_1	1.75E-08
D_2	-4.67E-11
E_0	1.18E-06
E_1	1.91E-09
$\lambda_{TK}(\mu\text{m})$	3.30E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^\circ\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	-0.6	0.7	1.3	1.9	4.0	6.7
-40~-20	-0.4	1.0	1.7	2.6	4.6	7.8
-20~0	-0.4	1.3	2.1	3.0	5.2	8.7
0~20	-0.2	1.5	2.5	3.4	5.9	9.6
20~40	0.1	2.0	2.9	4.0	6.8	10.9
40~60	0.4	2.6	3.5	4.4	7.6	11.8
60~80	1.0	3.1	4.1	5.1	8.3	12.6
80~100	1.2	3.3	4.3	5.5	8.8	13.6
100~120	1.3	3.4	4.5	5.7	9.1	14.0
120~140	1.3	3.4	4.7	5.9	9.4	14.4

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.1926	$P'_{s,t}$	0.1886
$P_{C,s}$	0.4383	$P'_{C',s}$	0.4714
$P_{d,C}$	0.2795	$P'_{d,C'}$	0.2314
$P_{e,d}$	0.2338	$P'_{e,d}$	0.2289
$P_{g,F}$	0.6552	$P'_{g,F'}$	0.5784
$P_{i,h}$		$P'_{i,h}$	

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0002	$\Delta P_{C,s}$	-0.0058
$\Delta P_{F,e}$	0.0070	$\Delta P_{g,F}$	0.0401

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	664
$T_g(^{\circ}\text{C})$	709
$T_{10}^{14.5}(^{\circ}\text{C})$	620
$T_{10}^{13}(^{\circ}\text{C})$	652
$T_{10}^{7.6}(^{\circ}\text{C})$	769
$\alpha_{30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	60
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	73
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	1
CR	1
RC(S)	1
RA(S)	1

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	520
F_A	202
$E(10^7\text{Pa})$	10881
$G(10^7\text{Pa})$	4377
μ	0.243
$B(10^{-12}/\text{Pa})$	3.27

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.973	0.946
2200	0.983	0.966
2000	0.993	0.987
1800	0.996	0.992
1600	0.998	0.996
1400	0.999	0.998
1200	0.999	0.998
1060	0.999	0.998
1000	0.999	0.998
950	0.998	0.997
900	0.998	0.996
850	0.997	0.995
800	0.997	0.995
700	0.996	0.993
650	0.995	0.991
600	0.994	0.989
550	0.989	0.979
500	0.973	0.946
480	0.960	0.921
460	0.941	0.886
440	0.908	0.825
420	0.837	0.700
400	0.486	0.236
390	0.158	0.025
380		
370		
360		
350		
340		
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	
λ_{70}/λ_5	445/390

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.52

退火增值系数 ECFA.	
β	280

备注 Remarks	

H-ZPK1S	618634	$n_d=1.61800$	$v_d=63.39$	$n_F-n_C=0.00975$
		$n_e=1.62033$	$v_e=63.09$	$n_F-n_C=0.00983$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.59096
$n_{1970.1}$	1970.1	1.59581
$n_{1529.6}$	1529.6	1.60100
$n_{1060.0}$	1060.0	1.60650
n_t	1014.0	1.60714
n_s	852.1	1.60714
n_r	706.5	1.61335
n_C	656.3	1.61504
$n_{C'}$	643.9	1.61551
$n_{\text{He-Ne}}$	632.8	1.61595
n_D	589.3	1.61791
n_d	587.6	1.61800
n_e	546.1	1.62033
n_F	486.1	1.62479
$n_{F'}$	480.0	1.62534
n_g	435.8	1.63008
n_h	404.7	1.63447
n_i	365.0	1.64192
$n_{313.2}$	313.2	1.65696
$n_{302.2}$	302.2	1.66138

色散公式常数 Constants of Dispersion Formula	
K_1	9.44049498E-001
L_1	1.09035762E+002
K_2	1.05017122E+000
L_2	1.32903754E-002
K_3	5.27568709E-001
L_3	7.41462968E-004

折射率温度系数常数 Constants of dn/dt	
D_0	-1.09E-05
D_1	1.14E-08
D_2	-4.44E-11
E_0	4.52E-07
E_1	3.49E-10
$\lambda_{TK}(\mu\text{m})$	1.59E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^\circ\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	-3.6	-3.4	-3.3	-3.1	-2.8	-2.6
-40~-20	-3.8	-3.5	-3.4	-3.2	-3.0	-2.8
-20~0	-3.7	-3.5	-3.3	-3.2	-3.0	-2.7
0~20	-3.7	-3.3	-3.2	-3.0	-2.9	-2.7
20~40	-3.7	-3.3	-3.3	-3.1	-2.9	-2.6
40~60	-3.6	-3.2	-3.1	-3.0	-2.8	-2.5
60~80	-3.6	-3.2	-3.1	-3.1	-2.8	-2.5
80~100	-3.6	-3.4	-3.1	-3.1	-2.8	-2.5
100~120	-3.9	-3.5	-3.4	-3.2	-2.8	-2.6
120~140	-3.9	-3.5	-3.5	-3.3	-2.9	-2.5

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2756	$P'_{s,t}$	0.2733
$P_{C,s}$	0.5348	$P'_{C',s}$	0.5782
$P_{d,C}$	0.3039	$P'_{d,C'}$	0.2534
$P_{e,d}$	0.2385	$P'_{e,d}$	0.2364
$P_{g,F}$	0.5431	$P'_{g,F'}$	0.4821
$P_{i,h}$	0.7644	$P'_{i,h}$	0.7579

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	-0.0345	$\Delta P_{C,s}$	-0.0168
$\Delta P_{F,e}$	0.0025	$\Delta P_{g,F}$	0.0054

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	618
$T_g(^{\circ}\text{C})$	650
$T_{10}^{14.5}(^{\circ}\text{C})$	553
$T_{10}^{13}(^{\circ}\text{C})$	589
$T_{10}^{7.6}(^{\circ}\text{C})$	703
$\alpha_{30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	99
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	114
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	4
CR	1
RC(S)	1
RA(S)	1

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	379
F_A	324
$E(10^7\text{Pa})$	7162
$G(10^7\text{Pa})$	2772
μ	0.292
$B(10^{-12}/\text{Pa})$	1.11

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.949	0.901
2200	0.965	0.932
2000	0.983	0.966
1800	0.991	0.982
1600	0.997	0.994
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
700	0.999	0.998
650	0.999	0.998
600	0.999	0.998
550	0.999	0.998
500	0.997	0.995
480	0.997	0.994
460	0.996	0.993
440	0.995	0.990
420	0.995	0.990
400	0.991	0.983
390	0.987	0.975
380	0.978	0.957
370	0.960	0.921
360	0.924	0.854
350	0.863	0.745
340	0.766	0.586
330	0.629	0.396
320	0.469	0.220
310	0.318	0.101
300	0.205	0.042
290		
280		

着色度 Color Code	
λ_{80}/λ_5	350/290
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.50

退火增值系数 ECFA.	
β	105

备注 Remarks	

H-ZPK2S	603655	$n_d=1.60300$	$v_d=65.47$	$n_F-n_C=0.00921$
		$n_e=1.60520$	$v_e=65.15$	$n_F-n_C=0.00929$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	
$n_{1970.1}$	1970.1	
$n_{1529.6}$	1529.6	
$n_{1060.0}$	1060.0	
n_t	1014.0	1.59256
n_s	852.1	1.59256
n_r	706.5	1.59858
n_C	656.3	1.60019
$n_{C'}$	643.9	1.60063
$n_{\text{He-Ne}}$	632.8	1.60105
n_D	589.3	1.60292
n_d	587.6	1.60300
n_e	546.1	1.60520
n_F	486.1	1.60940
$n_{F'}$	480.0	1.60992
n_g	435.8	1.61438
n_h	404.7	1.61850
n_i	365.0	1.62550
$n_{313.2}$	313.2	
$n_{302.2}$	302.2	

色散公式常数 Constants of Dispersion Formula	
A_0	2.53073192E+000
A_1	-8.34429910E-003
A_2	1.46551845E-002
A_3	-2.16647389E-004
A_4	5.35525389E-005
A_5	-2.46158263E-006

折射率温度系数常数 Constants of dn/dt	
D_0	-1.22E-05
D_1	1.14E-08
D_2	-2.20E-11
E_0	4.82E-07
E_1	3.10E-10
$\lambda_{TK}(\mu\text{m})$	6.80E-02

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	-4.1	-3.9	-3.8	-3.6	-3.5	-3.2
-40~-20	-4.2	-3.9	-3.8	-3.7	-3.5	-3.4
-20~0	-4.2	-3.8	-3.8	-3.7	-3.4	-3.4
0~20	-4.2	-3.8	-3.7	-3.7	-3.4	-3.3
20~40	-4.2	-3.8	-3.7	-3.6	-3.5	-3.2
40~60	-4.1	-3.8	-3.7	-3.6	-3.4	-3.2
60~80	-4.1	-3.8	-3.7	-3.6	-3.4	-3.0
80~100	-4.0	-3.8	-3.6	-3.6	-3.3	-3.0
100~120	-3.9	-3.7	-3.6	-3.5	-3.2	-2.9
120~140	-3.9	-3.7	-3.6	-3.4	-3.1	-2.9

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2834	$P'_{s,t}$	0.2809
$P_{C,s}$	0.5451	$P'_{C',s}$	0.5877
$P_{d,C}$	0.3051	$P'_{d,C'}$	0.2551
$P_{e,d}$	0.2389	$P'_{e,d}$	0.2368
$P_{g,F}$	0.5407	$P'_{g,F'}$	0.4801
$P_{i,h}$		$P'_{i,h}$	

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	-0.0263	$\Delta P_{C,s}$	-0.0115
$\Delta P_{F,e}$	0.0020	$\Delta P_{g,F}$	0.0065

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	619
$T_S(^{\circ}\text{C})$	648
$T_{10}^{14.5}(^{\circ}\text{C})$	563
$T_{10}^{13}(^{\circ}\text{C})$	595
$T_{10}^{7.6}(^{\circ}\text{C})$	699
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	93
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	115
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	4
CR	1
RC(S)	3
RA(S)	1

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	382
F_A	273
$E(10^7\text{Pa})$	6814
$G(10^7\text{Pa})$	2651
μ	0.285
$B(10^{-12}/\text{Pa})$	1.10

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.922	0.850
2200	0.943	0.889
2000	0.971	0.943
1800	0.985	0.970
1600	0.995	0.990
1400	0.998	0.997
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
700	0.998	0.997
650	0.998	0.997
600	0.998	0.997
550	0.998	0.997
500	0.997	0.995
480	0.997	0.994
460	0.996	0.993
440	0.995	0.990
420	0.995	0.990
400	0.992	0.984
390	0.987	0.975
380	0.978	0.957
370	0.961	0.923
360	0.926	0.857
350	0.862	0.743
340	0.751	0.564
330	0.581	0.337
320	0.361	0.130
310	0.164	0.027
300		
290		
280		

着色度 Color Code	
λ_{80}/λ_5	355/305
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	3.50

退火增值系数 ECFA.	
β	100

备注 Remarks	

H-QK3LS	487704	$n_d=1.48749$	$v_d=70.44$	$n_F-n_C=0.00692$
		$n_e=1.48914$	$v_e=70.26$	$n_F-n_{C'}=0.00696$

折射率 Refractive Index		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.46177
$n_{1970.1}$	1970.1	1.46737
$n_{1529.6}$	1529.6	1.47313
$n_{1060.0}$	1060.0	1.47856
n_t	1014.0	1.47913
n_s	852.1	1.47913
n_r	706.5	1.48410
n_C	656.3	1.48535
$n_{C'}$	643.9	1.48569
$n_{\text{He-Ne}}$	632.8	1.48601
n_D	589.3	1.48743
n_d	587.6	1.48749
n_e	546.1	1.48914
n_F	486.1	1.49227
$n_{F'}$	480.0	1.49265
n_g	435.8	1.49593
n_h	404.7	1.49894
n_i	365.0	1.50401
$n_{313.2}$	313.2	1.51414
$n_{302.2}$	302.2	1.51709

色散公式常数 Constants of Dispersion Formula	
K_1	6.01737491E-001
L_1	1.25749740E-002
K_2	8.58737004E-001
L_2	9.23325663E+001
K_3	5.86761501E-001
L_3	2.68750900E-003

折射率温度系数常数 Constants of dn/dt	
D_0	-9.26E-06
D_1	1.71E-08
D_2	-1.54E-11
E_0	3.26E-07
E_1	5.95E-10
$\lambda_{TK}(\mu\text{m})$	1.87E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^\circ\text{C}$)					
	t	C'	d	e	F'	g
-60~-40	-2.6	-2.3	-2.2	-2.2	-2.0	-1.9
-40~-20	-2.5	-2.2	-2.1	-2.1	-2.0	-1.8
-20~0	-2.3	-2.1	-2.0	-2.0	-1.9	-1.7
0~20	-2.1	-2.0	-2.0	-1.9	-1.8	-1.6
20~40	-2.1	-1.9	-1.8	-1.8	-1.6	-1.5
40~60	-2.1	-1.9	-1.7	-1.7	-1.5	-1.4
60~80	-1.9	-1.9	-1.7	-1.6	-1.4	-1.1
80~100	-1.7	-1.6	-1.4	-1.3	-1.1	-0.8
100~120	-1.7	-1.3	-1.2	-1.2	-0.9	-0.7
120~140	-1.5	-1.1	-1.1	-1.1	-0.8	-0.6

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.3251	$P'_{s,t}$	0.3232
$P_{C,s}$	0.5736	$P'_{C',s}$	0.6198
$P_{d,C}$	0.3096	$P'_{d,C'}$	0.2583
$P_{e,d}$	0.2388	$P'_{e,d}$	0.2374
$P_{g,F}$	0.5293	$P'_{g,F'}$	0.4707
$P_{i,h}$	0.7328	$P'_{i,h}$	0.7285

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0205	$\Delta P_{C,s}$	0.0053
$\Delta P_{F,e}$	0.0002	$\Delta P_{g,F}$	0.0035

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	475
$T_g(^{\circ}\text{C})$	569
$T_{10}^{14.5}(^{\circ}\text{C})$	432
$T_{10}^{13}(^{\circ}\text{C})$	466
$T_{10}^{7.6}(^{\circ}\text{C})$	674
$\alpha_{30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	92
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	102
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	2
D_A	4
CR	2
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	520
F_A	93
$E(10^7\text{Pa})$	6230
$G(10^7\text{Pa})$	2540
μ	0.227
$B(10^{-12}/\text{Pa})$	2.80

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.918	0.844
2200	0.938	0.879
2000	0.989	0.977
1800	0.994	0.989
1600	0.996	0.992
1400	0.990	0.980
1200	0.999	0.998
1060	0.999	0.999
1000	0.999	0.999
950	0.999	0.999
900	0.999	0.999
850	0.999	0.999
800	0.999	0.998
700	0.999	0.998
650	0.999	0.998
600	0.998	0.997
550	0.998	0.996
500	0.998	0.996
480	0.998	0.996
460	0.998	0.996
440	0.997	0.995
420	0.997	0.995
400	0.998	0.996
390	0.997	0.995
380	0.997	0.994
370	0.996	0.993
360	0.996	0.993
350	0.994	0.989
340	0.990	0.980
330	0.987	0.974
320	0.974	0.948
310	0.945	0.893
300	0.868	0.753
290	0.688	0.474
280	0.385	0.148

着色度 Color Code	
λ_{80}/λ_5	305/270
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	2.43

退火增值系数 ECFA.	
β	

备注 Remarks	

D-K9S	516641	n _d = 1.51633	v _d = 64.06	n _F -n _C = 0.00806
		n _e = 1.51825	v _e = 63.86	n _F '-n _C '= 0.00812

折射率 Refractive Index*		
	λ(nm)	
n _{2325.4}	2325.4	1.48829
n _{1970.1}	1970.1	1.49417
n _{1529.6}	1529.6	1.50027
n _{1060.0}	1060.0	1.50616
n _t	1014.0	1.50678
n _s	852.1	1.50678
n _r	706.5	1.51241
n _C	656.3	1.51385
n _{C'}	643.9	1.51425
n _{He-Ne}	632.8	1.51462
n _D	589.3	1.51626
n _d	587.6	1.51633
n _e	546.1	1.51825
n _F	486.1	1.52191
n _{F'}	480.0	1.52236
n _g	435.8	1.52621
n _h	404.7	1.52976
n _i	365.0	1.53576
n _{313.2}	313.2	1.54781
n _{302.2}	302.2	1.55135

色散公式常数 Constants of Dispersion Formula	
K ₁	5.67853792E-001
L ₁	2.38581579E-003
K ₂	7.02269689E-001
L ₂	1.35348332E-002
K ₃	1.08102455E+000
L ₃	1.07748228E+002

折射率温度系数常数 Constants of dn/dt	
D ₀	4.87E-06
D ₁	1.55E-08
D ₂	-1.35E-11
E ₀	4.17E-07
E ₁	5.20E-10
λ _{TK} (μm)	1.77E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	3.7	4.0	4.1	4.2	4.4	4.6
-40~-20	3.5	3.8	3.9	4.0	4.2	4.5
-20~0	3.6	3.8	3.9	4.0	4.2	4.6
0~20	3.6	3.9	4.0	4.1	4.3	4.7
20~40	3.7	4.0	4.1	4.3	4.5	4.8
40~60	3.8	4.1	4.2	4.5	4.6	4.9
60~80	3.8	4.2	4.3	4.5	4.8	5.0
80~100	3.9	4.4	4.5	4.7	5.0	5.3
100~120	4.1	4.5	4.6	4.7	5.1	5.5
120~140	4.3	4.7	4.8	4.9	5.3	5.6

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.3128	P' _{s,t}	0.3107
P _{C,s}	0.5635	P' _{C',s}	0.6087
P _{d,C}	0.3081	P' _{d,C'}	0.2569
P _{e,d}	0.2387	P' _{e,d}	0.2371
P _{g,F}	0.5339	P' _{g,F'}	0.4744
P _{i,h}	0.7444	P' _{i,h}	0.7394

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0282	ΔP _{C,s}	0.0103
ΔP _{F,e}	-0.0015	ΔP _{g,F}	-0.0027

热性质 Thermal Properties	
T _g (℃)	496
T _g (℃)	558
T ₁₀ ^{14.5} (℃)	451
T ₁₀ ¹³ (℃)	483
T ₁₀ ^{7.6} (℃)	637
α _{-30/70℃} (10 ⁻⁷ /K)	63
α _{100/300℃} (10 ⁻⁷ /K)	78
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	2
CR	1
RC(S)	1
RA(S)	2

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	492
F _A	72
E(10 ⁷ Pa)	8318
G(10 ⁷ Pa)	3430
μ	0.212
B(10 ⁻¹² /Pa)	2.72

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.918	0.842
2200	0.952	0.906
2000	0.989	0.978
1800	0.995	0.990
1600	0.997	0.995
1400	0.991	0.982
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
700	0.999	0.998
650	0.999	0.998
600	0.999	0.997
550	0.998	0.996
500	0.998	0.996
480	0.998	0.996
460	0.998	0.996
440	0.998	0.996
420	0.998	0.996
400	0.998	0.996
390	0.997	0.994
380	0.996	0.992
370	0.994	0.989
360	0.990	0.981
350	0.980	0.960
340	0.968	0.937
330	0.927	0.860
320	0.851	0.725
310	0.710	0.504
300	0.498	0.248
290	0.257	0.066
280		

着色度 Color Code	
λ ₈₀ /λ ₅	315/280
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	2.41

退火增值系数 ECFA.	
β	

备注 Remarks	
*:退火速率 anneal rate 4℃/h	

D-K9S ₋₂₅	516640	n _d = 1.51577	v _d = 63.99	n _F -n _C = 0.00806
		n _e = 1.51769	v _e = 63.79	n _F -n _C '= 0.00812

折射率 Refractive Index*		
	λ(nm)	
n _{2325.4}	2325.4	1.48773
n _{1970.1}	1970.1	1.49361
n _{1529.6}	1529.6	1.49971
n _{1060.0}	1060.0	1.50560
n _t	1014.0	1.50622
n _s	852.1	1.50622
n _r	706.5	1.51185
n _C	656.3	1.51329
n _{C'}	643.9	1.51369
n _{He-Ne}	632.8	1.51406
n _D	589.3	1.51570
n _d	587.6	1.51577
n _e	546.1	1.51769
n _F	486.1	1.52135
n _{F'}	480.0	1.52180
n _g	435.8	1.52565
n _h	404.7	1.52920
n _i	365.0	1.53520
n _{313.2}	313.2	1.54725
n _{302.2}	302.2	1.55079

色散公式常数 Constants of Dispersion Formula	
K ₁	1.08234297E+000
L ₁	1.07907645E+002
K ₂	5.48438846E-001
L ₂	2.19092900E-003
K ₃	7.19999855E-001
L ₃	1.34070020E-002

折射率温度系数常数 Constants of dn/dt	
D ₀	4.87E-06
D ₁	1.55E-08
D ₂	-1.35E-11
E ₀	4.17E-07
E ₁	5.20E-10
λ _{TK} (μm)	1.77E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	3.7	4.0	4.1	4.2	4.4	4.6
-40~-20	3.5	3.8	3.9	4.0	4.2	4.5
-20~0	3.6	3.8	3.9	4.0	4.2	4.6
0~20	3.6	3.9	4.0	4.1	4.3	4.7
20~40	3.7	4.0	4.1	4.3	4.5	4.8
40~60	3.8	4.1	4.2	4.5	4.6	4.9
60~80	3.8	4.2	4.3	4.5	4.8	5.0
80~100	3.9	4.4	4.5	4.7	5.0	5.3
100~120	4.1	4.5	4.6	4.7	5.1	5.5
120~140	4.3	4.7	4.8	4.9	5.3	5.6

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.3128	P' _{s,t}	0.3107
P _{C,s}	0.5635	P' _{C',s}	0.6087
P _{d,C}	0.3081	P' _{d,C'}	0.2569
P _{e,d}	0.2387	P' _{e,d}	0.2371
P _{g,F}	0.5339	P' _{g,F'}	0.4744
P _{i,h}	0.7444	P' _{i,h}	0.7394

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0285	ΔP _{C,s}	0.0105
ΔP _{F,e}	-0.0016	ΔP _{g,F}	-0.0029

热性质 Thermal Properties	
T _g (℃)	496
T _g (℃)	558
T ₁₀ ^{14.5} (℃)	451
T ₁₀ ¹³ (℃)	483
T ₁₀ ^{7.6} (℃)	637
α _{-30/70℃} (10 ⁻⁷ /K)	63
α _{100/300℃} (10 ⁻⁷ /K)	78
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	2
CR	1
RC(S)	1
RA(S)	2

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	492
F _A	72
E(10 ⁷ Pa)	8318
G(10 ⁷ Pa)	3430
μ	0.212
B(10 ⁻¹² /Pa)	2.72

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.918	0.842
2200	0.952	0.906
2000	0.989	0.978
1800	0.995	0.990
1600	0.997	0.995
1400	0.991	0.982
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
700	0.999	0.998
650	0.999	0.998
600	0.999	0.997
550	0.998	0.996
500	0.998	0.996
480	0.998	0.996
460	0.998	0.996
440	0.998	0.996
420	0.998	0.996
400	0.998	0.996
390	0.997	0.994
380	0.996	0.992
370	0.994	0.989
360	0.990	0.981
350	0.980	0.960
340	0.968	0.937
330	0.927	0.860
320	0.851	0.725
310	0.710	0.504
300	0.498	0.248
290	0.257	0.066
280		

着色度 Color Code	
λ ₈₀ /λ ₅	315/280
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	2.41

退火增值系数 ECFA.	
β	

备注 Remarks
*:退火速率 anneal rate 25℃/h

D-ZK2S	583594	$n_d=1.58313$	$v_d=59.38$	$n_F-n_C=0.00982$
		$n_e=1.58547$	$v_e=59.14$	$n_F-n_C=0.00990$

折射率 Refractive Index*		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.55336
$n_{1970.1}$	1970.1	1.55910
$n_{1529.6}$	1529.6	1.56514
$n_{1060.0}$	1060.0	1.57127
n_t	1014.0	1.57196
n_s	852.1	1.57196
n_r	706.5	1.57842
n_C	656.3	1.58013
$n_{C'}$	643.9	1.58061
$n_{\text{He-Ne}}$	632.8	1.58106
n_D	589.3	1.58304
n_d	587.6	1.58313
n_e	546.1	1.58547
n_F	486.1	1.58995
$n_{F'}$	480.0	1.59051
n_g	435.8	1.59527
n_h	404.7	1.59967
n_i	365.0	1.60717
$n_{313.2}$	313.2	1.62237
$n_{302.2}$	302.2	1.62686

色散公式常数 Constants of Dispersion Formula	
K_1	4.02765796E-001
L_1	1.90634710E-002
K_2	1.01706887E+000
L_2	1.01270923E+002
K_3	1.06495499E+000
L_3	5.90052089E-003

折射率温度系数常数 Constants of dn/dt	
D_0	2.00E-06
D_1	1.15E-08
D_2	4.47E-11
E_0	6.34E-07
E_1	6.43E-10
$\lambda_{TK}(\mu\text{m})$	8.90E-02

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	2.5	3.2	3.5	3.7	3.9	4.2
-20~0	2.4	3.1	3.3	3.5	3.9	4.2
0~20	2.7	3.1	3.4	3.5	3.8	4.2
20~40	2.7	3.1	3.5	3.6	3.9	4.2
40~60	2.8	3.2	3.4	3.6	3.9	4.3
60~80	3.1	3.5	3.8	4.1	4.4	4.6
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2885	$P'_{s,t}$	0.2862
$P_{C,s}$	0.5443	$P'_{C',s}$	0.5881
$P_{d,C}$	0.3051	$P'_{d,C'}$	0.2544
$P_{e,d}$	0.2385	$P'_{e,d}$	0.2366
$P_{g,F}$	0.5412	$P'_{g,F'}$	0.4806
$P_{i,h}$	0.7630	$P'_{i,h}$	0.7569

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0067	$\Delta P_{C,s}$	0.0022
$\Delta P_{F,e}$	-0.0009	$\Delta P_{g,F}$	-0.0033

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	501
$T_S(^{\circ}\text{C})$	545
$T_{10}^{14.5}(^{\circ}\text{C})$	456
$T_{10}^{13}(^{\circ}\text{C})$	490
$T_{10}^{7.6}(^{\circ}\text{C})$	604
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	73
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	92
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	6
CR	2
RC(S)	2
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	610
F_A	93
$E(10^7\text{Pa})$	9044
$G(10^7\text{Pa})$	3635
μ	0.244
$B(10^{-12}/\text{Pa})$	2.20

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.897	0.804
2200	0.943	0.888
2000	0.983	0.966
1800	0.991	0.982
1600	0.996	0.992
1400	0.993	0.986
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
700	0.999	0.998
650	0.998	0.997
600	0.998	0.997
550	0.998	0.997
500	0.998	0.997
480	0.998	0.996
460	0.997	0.995
440	0.996	0.992
420	0.996	0.992
400	0.995	0.991
390	0.994	0.989
380	0.993	0.987
370	0.989	0.979
360	0.982	0.965
350	0.967	0.936
340	0.939	0.881
330	0.887	0.786
320	0.794	0.631
310	0.650	0.422
300	0.462	0.213
290	0.270	0.073
280	0.148	0.022

着色度 Color Code	
λ_{80}/λ_5	335/285
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	2.96

退火增值系数 ECFA.	
β	90

备注 Remarks
*:退火速率 anneal rate 4℃/h

D-ZK2S ₂₅	582593	n _d = 1.58241	v _d = 59.31	n _F -n _C = 0.00982
		n _e = 1.58475	v _e = 59.07	n _F -n _{C'} = 0.00990

折射率 Refractive Index*		
	λ(nm)	
n _{2325.4}	2325.4	1.55267
n _{1970.1}	1970.1	1.55840
n _{1529.6}	1529.6	1.56443
n _{1060.0}	1060.0	1.57055
n _t	1014.0	1.57124
n _s	852.1	1.57124
n _r	706.5	1.57770
n _C	656.3	1.57941
n _{C'}	643.9	1.57989
n _{He-Ne}	632.8	1.58034
n _D	589.3	1.58232
n _d	587.6	1.58241
n _e	546.1	1.58475
n _F	486.1	1.58923
n _{F'}	480.0	1.58979
n _g	435.8	1.59455
n _h	404.7	1.59895
n _i	365.0	1.60644
n _{313.2}	313.2	1.62164
n _{302.2}	302.2	1.62614

色散公式常数 Constants of Dispersion Formula	
K ₁	1.10449460E+000
L ₁	6.20948070E-003
K ₂	3.60941240E-001
L ₂	1.96844329E-002
K ₃	1.01208343E+000
L ₃	1.01038646E+002

折射率温度系数常数 Constants of dn/dt	
D ₀	2.00E-06
D ₁	1.15E-08
D ₂	4.47E-11
E ₀	6.34E-07
E ₁	6.43E-10
λ _{TK} (μm)	8.90E-02

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	2.5	3.2	3.5	3.7	3.9	4.2
-20~0	2.4	3.1	3.3	3.5	3.9	4.2
0~20	2.7	3.1	3.4	3.5	3.8	4.2
20~40	2.7	3.1	3.5	3.6	3.9	4.2
40~60	2.8	3.2	3.4	3.6	3.9	4.3
60~80	3.1	3.5	3.8	4.1	4.4	4.6
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2884	P' _{s,t}	0.2861
P _{C,s}	0.5441	P' _{C',s}	0.5880
P _{d,C}	0.3052	P' _{d,C'}	0.2544
P _{e,d}	0.2385	P' _{e,d}	0.2366
P _{g,F}	0.5412	P' _{g,F'}	0.4805
P _{i,h}	0.7629	P' _{i,h}	0.7568

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0068	ΔP _{C,s}	0.0021
ΔP _{F,e}	-0.0010	ΔP _{g,F}	-0.0035

热性质 Thermal Properties	
T _g (℃)	501
T _g (℃)	545
T ₁₀ ^{14.5} (℃)	456
T ₁₀ ¹³ (℃)	490
T ₁₀ ^{7.6} (℃)	604
α _{30/70℃} (10 ⁻⁷ /K)	73
α _{100/300℃} (10 ⁻⁷ /K)	92
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	6
CR	2
RC(S)	2
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	610
F _A	93
E(10 ⁷ Pa)	9044
G(10 ⁷ Pa)	3635
μ	0.244
B(10 ⁻¹² /Pa)	2.20

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.897	0.804
2200	0.943	0.888
2000	0.983	0.966
1800	0.991	0.982
1600	0.996	0.992
1400	0.993	0.986
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
700	0.999	0.998
650	0.998	0.997
600	0.998	0.997
550	0.998	0.997
500	0.998	0.997
480	0.998	0.996
460	0.997	0.995
440	0.996	0.992
420	0.996	0.992
400	0.995	0.991
390	0.994	0.989
380	0.993	0.987
370	0.989	0.979
360	0.982	0.965
350	0.967	0.936
340	0.939	0.881
330	0.887	0.786
320	0.794	0.631
310	0.650	0.422
300	0.462	0.213
290	0.270	0.073
280	0.148	0.022

着色度 Color Code	
λ ₈₀ /λ ₅	335/285
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	2.96

退火增值系数 ECFA.	
β	90

备注 Remarks
*:退火速率 anneal rate 25℃/h

D-ZK3S	589612	$n_d=1.58913$	$v_d=61.15$	$n_F-n_C=0.00963$
		$n_e=1.59143$	$v_e=60.95$	$n_F-n_C=0.00970$

折射率 Refractive Index*		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.55735
$n_{1970.1}$	1970.1	1.56384
$n_{1529.6}$	1529.6	1.57058
$n_{1060.0}$	1060.0	1.57718
n_t	1014.0	1.57790
n_s	852.1	1.57790
n_r	706.5	1.58447
n_C	656.3	1.58617
$n_{C'}$	643.9	1.58665
$n_{\text{He-Ne}}$	632.8	1.58709
n_D	589.3	1.58904
n_d	587.6	1.58913
n_e	546.1	1.59143
n_F	486.1	1.59581
$n_{F'}$	480.0	1.59635
n_g	435.8	1.60097
n_h	404.7	1.60524
n_i	365.0	1.61247
$n_{313.2}$	313.2	1.62705
$n_{302.2}$	302.2	1.63135

色散公式常数 Constants of Dispersion Formula	
K_1	1.33936811E+000
L_1	7.60612309E-003
K_2	1.48690268E-001
L_2	2.38444644E-002
K_3	1.00954033E+000
L_3	8.90419787E+001

折射率温度系数常数 Constants of dn/dt	
D_0	1.68E-06
D_1	9.68E-09
D_2	-2.00E-11
E_0	5.34E-07
E_1	1.41E-09
$\lambda_{TK}(\mu\text{m})$	1.72E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	2.5	3.0	3.1	3.2	3.4	3.5
-20~0	2.3	2.8	2.9	3.3	3.5	3.7
0~20	2.5	2.8	3.2	3.4	3.5	3.8
20~40	2.3	3.1	3.0	3.2	3.7	4.6
40~60	2.6	3.0	3.1	3.1	3.9	3.9
60~80	3.1	3.3	3.4	3.4	3.8	3.9
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.3026	$P'_{s,t}$	0.3004
$P_{C,s}$	0.5558	$P'_{C',s}$	0.6006
$P_{d,C}$	0.3069	$P'_{d,C'}$	0.2560
$P_{e,d}$	0.2386	$P'_{e,d}$	0.2369
$P_{g,F}$	0.5362	$P'_{g,F'}$	0.4764
$P_{i,h}$	0.7504	$P'_{i,h}$	0.7450

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0240	$\Delta P_{C,s}$	0.0095
$\Delta P_{F,e}$	-0.0019	$\Delta P_{g,F}$	-0.0053

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	515
$T_g(^{\circ}\text{C})$	560
$T_{10}^{14.5}(^{\circ}\text{C})$	471
$T_{10}^{13}(^{\circ}\text{C})$	499
$T_{10}^{7.6}(^{\circ}\text{C})$	605
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	72
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	93
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	3
D_A	6
CR	4c
RC(S)	2
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	628
F_A	125
$E(10^7\text{Pa})$	9767
$G(10^7\text{Pa})$	3958
μ	0.234
$B(10^{-12}/\text{Pa})$	2.08

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.830	0.690
2200	0.916	0.839
2000	0.977	0.954
1800	0.989	0.979
1600	0.998	0.996
1400	0.994	0.989
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
700	0.999	0.998
650	0.999	0.998
600	0.999	0.998
550	0.999	0.998
500	0.998	0.997
480	0.998	0.996
460	0.998	0.996
440	0.997	0.995
420	0.997	0.994
400	0.995	0.991
390	0.993	0.987
380	0.990	0.980
370	0.983	0.966
360	0.967	0.936
350	0.939	0.882
340	0.880	0.780
330	0.790	0.630
320	0.660	0.430
310	0.470	0.220
300	0.280	0.080
290	0.130	0.020
280		

着色度 Color Code	
λ_{80}/λ_5	345/295
λ_{70}/λ_5	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	2.83

退火增值系数 ECFA.	
β	100

备注 Remarks
*:退火速率 anneal rate 4℃/h

D-ZK3S ₂₅	588613	n _d = 1.58833	v _d = 61.28	n _F -n _C = 0.00960
		n _e = 1.59062	v _e = 61.08	n _F -n _{C'} = 0.00967

折射率 Refractive Index*		
	λ(nm)	
n _{2325.4}	2325.4	1.55659
n _{1970.1}	1970.1	1.56306
n _{1529.6}	1529.6	1.56980
n _{1060.0}	1060.0	1.57642
n _t	1014.0	1.57714
n _s	852.1	1.57714
n _r	706.5	1.58369
n _C	656.3	1.58539
n _{C'}	643.9	1.58586
n _{He-Ne}	632.8	1.58630
n _D	589.3	1.58824
n _d	587.6	1.58833
n _e	546.1	1.59062
n _F	486.1	1.59499
n _{F'}	480.0	1.59553
n _g	435.8	1.60014
n _h	404.7	1.60441
n _i	365.0	1.61164
n _{313.2}	313.2	1.62625
n _{302.2}	302.2	1.63056

色散公式常数 Constants of Dispersion Formula	
K ₁	1.24347604E+000
L ₁	1.08031442E+002
K ₂	9.18798491E-001
L ₂	1.39520404E-002
K ₃	5.67180042E-001
L ₃	1.27620015E-003

折射率温度系数常数 Constants of dn/dt	
D ₀	1.68E-06
D ₁	9.68E-09
D ₂	-2.00E-11
E ₀	5.34E-07
E ₁	1.41E-09
λ _{TK} (μm)	1.72E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	2.5	3.0	3.1	3.2	3.4	3.5
-20~0	2.3	2.8	2.9	3.3	3.5	3.7
0~20	2.5	2.8	3.2	3.4	3.5	3.8
20~40	2.3	3.1	3.0	3.2	3.7	4.6
40~60	2.6	3.0	3.1	3.1	3.9	3.9
60~80	3.1	3.3	3.4	3.4	3.8	3.9
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.3032	P' _{s,t}	0.3010
P _{C,s}	0.5555	P' _{C',s}	0.6003
P _{d,C}	0.3068	P' _{d,C'}	0.2557
P _{e,d}	0.2385	P' _{e,d}	0.2368
P _{g,F}	0.5374	P' _{g,F'}	0.4775
P _{i,h}	0.7537	P' _{i,h}	0.7483

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0237	ΔP _{C,s}	0.0089
ΔP _{F,e}	-0.0016	ΔP _{g,F}	-0.0039

热性质 Thermal Properties	
T _g (℃)	515
T _g (℃)	560
T ₁₀ ^{14.5} (℃)	471
T ₁₀ ¹³ (℃)	499
T ₁₀ ^{7.6} (℃)	605
α _{30/70℃} (10 ⁻⁷ /K)	72
α _{100/300℃} (10 ⁻⁷ /K)	93
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	3
D _A	6
CR	4c
RC(S)	2
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	628
F _A	125
E(10 ⁷ Pa)	9767
G(10 ⁷ Pa)	3958
μ	0.234
B(10 ⁻¹² /Pa)	2.08

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.830	0.690
2200	0.916	0.839
2000	0.977	0.954
1800	0.989	0.979
1600	0.998	0.996
1400	0.994	0.989
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
700	0.999	0.998
650	0.999	0.998
600	0.999	0.998
550	0.999	0.998
500	0.998	0.997
480	0.998	0.996
460	0.998	0.996
440	0.997	0.995
420	0.997	0.994
400	0.995	0.991
390	0.993	0.987
380	0.990	0.980
370	0.983	0.966
360	0.967	0.936
350	0.939	0.882
340	0.880	0.780
330	0.790	0.630
320	0.660	0.430
310	0.470	0.220
300	0.280	0.080
290	0.130	0.020
280		

着色度 Color Code	
λ ₈₀ /λ ₅	345/295
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	2.83

退火增值系数 ECFA.	
β	100

备注 Remarks	
*:退火速率 anneal rate 25℃/h	

D-LaK6S	694531	n _d = 1.69384	v _d = 53.13	n _F -n _C = 0.01306
		n _e = 1.69695	v _e = 52.90	n _F -n _{C'} = 0.01318

折射率 Refractive Index*		
	λ(nm)	
n _{2325.4}	2325.4	1.65619
n _{1970.1}	1970.1	1.66325
n _{1529.6}	1529.6	1.67069
n _{1060.0}	1060.0	1.67836
n _t	1014.0	1.67924
n _s	852.1	1.67924
n _r	706.5	1.68763
n _C	656.3	1.68988
n _{C'}	643.9	1.69051
n _{He-Ne}	632.8	1.69110
n _D	589.3	1.69372
n _d	587.6	1.69384
n _e	546.1	1.69695
n _F	486.1	1.70294
n _{F'}	480.0	1.70368
n _g	435.8	1.71008
n _h	404.7	1.71604
n _i	365.0	1.72624
n _{313.2}	313.2	1.74724
n _{302.2}	302.2	1.75354

色散公式常数 Constants of Dispersion Formula	
K ₁	4.77723115E-001
L ₁	2.26962287E-002
K ₂	1.33623366E+000
L ₂	6.59605302E-003
K ₃	1.22543438E+000
L ₃	9.42027569E+001

折射率温度系数常数 Constants of dn/dt	
D ₀	1.33E-06
D ₁	1.27E-08
D ₂	-2.36E-11
E ₀	5.62E-07
E ₁	7.08E-10
λ _{TK} (μm)	1.99E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	2.4	2.9	3.0	3.2	3.8	4.0
-40~-20	2.4	2.9	3.0	3.2	3.7	4.0
-20~0	2.4	3.0	3.3	3.5	3.8	4.3
0~20	2.5	3.1	3.3	3.6	3.9	4.3
20~40	2.6	3.2	3.5	3.7	4.2	4.5
40~60	2.7	3.3	3.5	3.7	4.3	4.7
60~80	2.8	3.3	3.5	3.7	4.3	4.9
80~100	2.9	3.4	3.8	4.0	4.4	5.1
100~120	3.0	3.5	4.0	4.2	4.6	5.3
120~140	3.1	3.7	4.1	4.3	4.7	5.4

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2791	P' _{s,t}	0.2766
P _{C,s}	0.5354	P' _{C',s}	0.5786
P _{d,C}	0.3034	P' _{d,C'}	0.2529
P _{e,d}	0.2383	P' _{e,d}	0.2362
P _{g,F}	0.5470	P' _{g,F'}	0.4855
P _{i,h}	0.7813	P' _{i,h}	0.7744

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0179	ΔP _{C,s}	0.0080
ΔP _{F,e}	-0.0024	ΔP _{g,F}	-0.0082

热性质 Thermal Properties	
T _g (℃)	522
T _g (℃)	560
T ₁₀ ^{14.5} (℃)	485
T ₁₀ ¹³ (℃)	513
T ₁₀ ^{7.6} (℃)	616
α _{-30/70℃} (10 ⁻⁷ /K)	75
α _{100/300℃} (10 ⁻⁷ /K)	95
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	6
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	665
F _A	138
E(10 ⁷ Pa)	11369
G(10 ⁷ Pa)	4445
μ	0.279
B(10 ⁻¹² /Pa)	1.89

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.840	0.710
2200	0.960	0.922
2000	0.987	0.974
1800	0.998	0.996
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	0.998	0.997
700	0.998	0.996
650	0.998	0.996
600	0.998	0.996
550	0.998	0.996
500	0.997	0.994
480	0.995	0.990
460	0.993	0.987
440	0.991	0.983
420	0.990	0.980
400	0.988	0.977
390	0.987	0.974
380	0.983	0.966
370	0.974	0.949
360	0.958	0.918
350	0.933	0.870
340	0.883	0.780
330	0.800	0.640
320	0.650	0.430
310	0.400	0.160
300	0.120	0.010
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	360/305
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	3.50

退火增值系数 ECFA.	
β	135

备注 Remarks
*:退火速率 anneal rate 4℃/h

D-LaK6S ₂₅	693531	n _d = 1.69281	v _d = 53.05	n _F -n _C = 0.01306
		n _e = 1.69592	v _e = 52.82	n _F -n _{C'} = 0.01318

折射率 Refractive Index*		
	λ(nm)	
n _{2325.4}	2325.4	1.65516
n _{1970.1}	1970.1	1.66222
n _{1529.6}	1529.6	1.66966
n _{1060.0}	1060.0	1.67733
n _t	1014.0	1.67821
n _s	852.1	1.67821
n _r	706.5	1.68660
n _C	656.3	1.68885
n _{C'}	643.9	1.68948
n _{He-Ne}	632.8	1.69007
n _D	589.3	1.69269
n _d	587.6	1.69281
n _e	546.1	1.69592
n _F	486.1	1.70191
n _{F'}	480.0	1.70265
n _g	435.8	1.70905
n _h	404.7	1.71501
n _i	365.0	1.72521
n _{313.2}	313.2	1.74621
n _{302.2}	302.2	1.75251

色散公式常数 Constants of Dispersion Formula	
K ₁	1.22299893E+000
L ₁	9.40859262E+001
K ₂	4.71209941E-001
L ₂	2.27830104E-002
K ₃	1.33928922E+000
L ₃	6.65285316E-003

折射率温度系数常数 Constants of dn/dt	
D ₀	1.33E-06
D ₁	1.27E-08
D ₂	-2.36E-11
E ₀	5.62E-07
E ₁	7.08E-10
λ _{TK} (μm)	1.99E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	2.4	2.9	3.0	3.2	3.8	4.0
-40~-20	2.4	2.9	3.0	3.2	3.7	4.0
-20~0	2.4	3.0	3.3	3.5	3.8	4.3
0~20	2.5	3.1	3.3	3.6	3.9	4.3
20~40	2.6	3.2	3.5	3.7	4.2	4.5
40~60	2.7	3.3	3.5	3.7	4.3	4.7
60~80	2.8	3.3	3.5	3.7	4.3	4.9
80~100	2.9	3.4	3.8	4.0	4.4	5.1
100~120	3.0	3.5	4.0	4.2	4.6	5.3
120~140	3.1	3.7	4.1	4.3	4.7	5.4

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2791	P' _{s,t}	0.2766
P _{C,s}	0.5354	P' _{C',s}	0.5786
P _{d,C}	0.3034	P' _{d,C'}	0.2529
P _{e,d}	0.2383	P' _{e,d}	0.2362
P _{g,F}	0.5470	P' _{g,F'}	0.4855
P _{i,h}	0.7813	P' _{i,h}	0.7744

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0183	ΔP _{C,s}	0.0082
ΔP _{F,e}	-0.0024	ΔP _{g,F}	-0.0083

热性质 Thermal Properties	
T _g (℃)	522
T _g (℃)	560
T ₁₀ ^{14.5} (℃)	485
T ₁₀ ¹³ (℃)	513
T ₁₀ ^{7.6} (℃)	616
α _{30/70℃} (10 ⁻⁷ /K)	75
α _{100/300℃} (10 ⁻⁷ /K)	95
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	6
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	665
F _A	138
E(10 ⁷ Pa)	11369
G(10 ⁷ Pa)	4445
μ	0.279
B(10 ⁻¹² /Pa)	1.89

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.840	0.710
2200	0.960	0.922
2000	0.987	0.974
1800	0.998	0.996
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	0.998	0.997
700	0.998	0.996
650	0.998	0.996
600	0.998	0.996
550	0.998	0.996
500	0.997	0.994
480	0.995	0.990
460	0.993	0.987
440	0.991	0.983
420	0.990	0.980
400	0.988	0.977
390	0.987	0.974
380	0.983	0.966
370	0.974	0.949
360	0.958	0.918
350	0.933	0.870
340	0.883	0.780
330	0.800	0.640
320	0.650	0.430
310	0.400	0.160
300	0.120	0.010
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	360/305
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	3.50

退火增值系数 ECFA.	
β	135

备注 Remarks
*:退火速率 anneal rate 25℃/h

D-LaF53S	743493	$n_d=1.74330$	$v_d=49.33$	$n_F-n_C=0.01507$
		$n_e=1.74689$	$v_e=49.08$	$n_F-n_C=0.01522$

折射率 Refractive Index*		
	$\lambda(\text{nm})$	
$n_{2325.4}$	2325.4	1.70295
$n_{1970.1}$	1970.1	1.71012
$n_{1529.6}$	1529.6	1.71776
$n_{1060.0}$	1060.0	1.72587
n_t	1014.0	1.72682
n_s	852.1	1.72682
n_r	706.5	1.73619
n_C	656.3	1.73876
$n_{C'}$	643.9	1.73948
$n_{\text{He-Ne}}$	632.8	1.74015
n_D	589.3	1.74317
n_d	587.6	1.74330
n_e	546.1	1.74689
n_F	486.1	1.75383
$n_{F'}$	480.0	1.75469
n_g	435.8	1.76216
n_h	404.7	1.76914
n_i	365.0	1.78117
$n_{313.2}$	313.2	1.80619
$n_{302.2}$	302.2	1.81377

色散公式常数 Constants of Dispersion Formula	
K_1	6.45397592E-001
L_1	2.34993570E-002
K_2	1.17528667E+000
L_2	8.77755219E+001
K_3	1.32747885E+000
L_3	6.06015970E-003

折射率温度系数常数 Constants of dn/dt	
D_0	7.67E-06
D_1	2.36E-08
D_2	-1.95E-10
E_0	6.35E-07
E_1	3.67E-10
$\lambda_{TK}(\mu\text{m})$	2.08E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative ($10^{-6}/^{\circ}\text{C}$)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	4.8	5.3	5.7	5.8	6.0	6.6
-20~0	5.8	6.4	6.8	7.2	7.5	7.9
0~20	6.0	6.6	7.2	7.3	8.2	8.9
20~40	6.4	7.2	7.4	7.5	8.3	9.0
40~60	6.6	7.3	7.6	7.6	8.5	9.1
60~80	7.0	7.4	7.6	7.9	8.5	9.3
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
$P_{s,t}$	0.2671	$P'_{s,t}$	0.2645
$P_{C,s}$	0.5249	$P'_{C',s}$	0.5671
$P_{d,C}$	0.3015	$P'_{d,C'}$	0.2512
$P_{e,d}$	0.2381	$P'_{e,d}$	0.2358
$P_{g,F}$	0.5528	$P'_{g,F'}$	0.4903
$P_{i,h}$	0.7985	$P'_{i,h}$	0.7907

异常色散 Abnormal Dispersions			
$\Delta P_{C,t}$	0.0133	$\Delta P_{C,s}$	0.0065
$\Delta P_{F,e}$	-0.0024	$\Delta P_{g,F}$	-0.0089

热性质 Thermal Properties	
$T_g(^{\circ}\text{C})$	557
$T_g(^{\circ}\text{C})$	590
$T_{10}^{14.5}(^{\circ}\text{C})$	513
$T_{10}^{13}(^{\circ}\text{C})$	538
$T_{10}^{7.6}(^{\circ}\text{C})$	641
$\alpha_{-30/70^{\circ}\text{C}}(10^{-7}/\text{K})$	56
$\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$	72
$\lambda(\text{W/m}\cdot\text{K})$	

化学性质 Chemical Properties	
	Grade
D_W	1
D_A	6
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
$H_K(10^7\text{Pa})$	673
F_A	101
$E(10^7\text{Pa})$	11978
$G(10^7\text{Pa})$	4614
μ	0.298
$B(10^{-12}/\text{Pa})$	2.20

内透射率 Internal Transmittance		
$\lambda(\text{nm})$	$\tau 5\text{mm}$	$\tau 10\text{mm}$
2400	0.825	0.681
2200	0.953	0.909
2000	0.982	0.964
1800	0.994	0.988
1600	0.998	0.996
1400	0.998	0.997
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	0.998	0.997
700	0.998	0.996
650	0.998	0.996
600	0.997	0.995
550	0.997	0.995
500	0.997	0.995
480	0.996	0.993
460	0.995	0.991
440	0.993	0.987
420	0.991	0.983
400	0.986	0.973
390	0.981	0.962
380	0.970	0.940
370	0.948	0.898
360	0.908	0.824
350	0.847	0.717
340	0.750	0.563
330	0.628	0.394
320	0.486	0.236
310	0.316	0.100
300	0.214	0.046
290	0.145	0.021
280		

着色度 Color Code	
$\lambda_{80}/\lambda_{50}$	370/295
$\lambda_{70}/\lambda_{50}$	

其他性质 Other Properties	
$\rho(\text{g}/\text{cm}^3)$	4.26

退火增值系数 ECFA.	
β	145

备注 Remarks
*:退火速率 anneal rate 4℃/h

D-LaF53S ₂₅	742493	n _d = 1.74210	v _d = 49.25	n _F -n _C = 0.01507
		n _e = 1.74569	v _e = 49.00	n _F -n _{C'} = 0.01522

折射率 Refractive Index*		
	λ(nm)	
n _{2325.4}	2325.4	1.70175
n _{1970.1}	1970.1	1.70892
n _{1529.6}	1529.6	1.71656
n _{1060.0}	1060.0	1.72467
n _t	1014.0	1.72562
n _s	852.1	1.72562
n _r	706.5	1.73499
n _C	656.3	1.73756
n _{C'}	643.9	1.73828
n _{He-Ne}	632.8	1.73895
n _D	589.3	1.74197
n _d	587.6	1.74210
n _e	546.1	1.74569
n _F	486.1	1.75263
n _{F'}	480.0	1.75349
n _g	435.8	1.76096
n _h	404.7	1.76794
n _i	365.0	1.77997
n _{313.2}	313.2	1.80499
n _{302.2}	302.2	1.81257

色散公式常数 Constants of Dispersion Formula	
K ₁	1.32239317E+000
L ₁	6.06224219E-003
K ₂	6.46347208E-001
L ₂	2.34824415E-002
K ₃	1.17507569E+000
L ₃	8.78164211E+001

折射率温度系数常数 Constants of dn/dt	
D ₀	7.67E-06
D ₁	2.36E-08
D ₂	-1.95E-10
E ₀	6.35E-07
E ₁	3.67E-10
λ _{TK} (μm)	2.08E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40						
-40~-20	4.8	5.3	5.7	5.8	6.0	6.6
-20~0	5.8	6.4	6.8	7.2	7.5	7.9
0~20	6.0	6.6	7.2	7.3	8.2	8.9
20~40	6.4	7.2	7.4	7.5	8.3	9.0
40~60	6.6	7.3	7.6	7.6	8.5	9.1
60~80	7.0	7.4	7.6	7.9	8.5	9.3
80~100						
100~120						
120~140						

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2671	P' _{s,t}	0.2645
P _{C,s}	0.5249	P' _{C',s}	0.5670
P _{d,C}	0.3015	P' _{d,C'}	0.2513
P _{e,d}	0.2381	P' _{e,d}	0.2358
P _{g,F}	0.5528	P' _{g,F'}	0.4903
P _{i,h}	0.7985	P' _{i,h}	0.7906

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0137	ΔP _{C,s}	0.0067
ΔP _{F,e}	-0.0024	ΔP _{g,F}	-0.0090

热性质 Thermal Properties	
T _g (℃)	557
T _g (℃)	590
T ₁₀ ^{14.5} (℃)	513
T ₁₀ ¹³ (℃)	538
T ₁₀ ^{7.6} (℃)	641
α _{-30/70℃} (10 ⁻⁷ /K)	56
α _{100/300℃} (10 ⁻⁷ /K)	72
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	6
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	673
F _A	101
E(10 ⁷ Pa)	11978
G(10 ⁷ Pa)	4614
μ	0.298
B(10 ⁻¹² /Pa)	2.20

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.825	0.681
2200	0.953	0.909
2000	0.982	0.964
1800	0.994	0.988
1600	0.998	0.996
1400	0.998	0.997
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	0.998	0.997
700	0.998	0.996
650	0.998	0.996
600	0.997	0.995
550	0.997	0.995
500	0.997	0.995
480	0.996	0.993
460	0.995	0.991
440	0.993	0.987
420	0.991	0.983
400	0.986	0.973
390	0.981	0.962
380	0.970	0.940
370	0.948	0.898
360	0.908	0.824
350	0.847	0.717
340	0.750	0.563
330	0.628	0.394
320	0.486	0.236
310	0.316	0.100
300	0.214	0.046
290	0.145	0.021
280		

着色度 Color Code	
λ ₈₀ /λ ₅	370/295
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.26

退火增值系数 ECFA.	
β	145

备注 Remarks
*:退火速率 anneal rate 25℃/h

D-ZLaF52S	810410	n _d = 1.81000	v _d = 40.99	n _F -n _C = 0.01976
		n _e = 1.81469	v _e = 40.74	n _F -n _{C'} = 0.02000

折射率 Refractive Index*		
	λ(nm)	
n _{2325.4}	2325.4	1.76515
n _{1970.1}	1970.1	1.77202
n _{1529.6}	1529.6	1.77958
n _{1060.0}	1060.0	1.78833
n _t	1014.0	1.78943
n _s	852.1	1.78943
n _r	706.5	1.80087
n _C	656.3	1.80413
n _{C'}	643.9	1.80506
n _{He-Ne}	632.8	1.80593
n _D	589.3	1.80983
n _d	587.6	1.81000
n _e	546.1	1.81469
n _F	486.1	1.82389
n _{F'}	480.0	1.82506
n _g	435.8	1.83516
n _h	404.7	1.84478
n _i	365.0	1.86180
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	1.88205933E+000
L ₁	9.84915169E-003
K ₂	3.02908859E-001
L ₂	4.06191391E-002
K ₃	1.25387380E+000
L ₃	9.58936040E+001

折射率温度系数常数 Constants of dn/dt	
D ₀	5.23E-06
D ₁	1.56E-08
D ₂	-3.55E-11
E ₀	8.33E-07
E ₁	7.37E-10
λ _{TK} (μm)	2.17E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	4.9	5.8	6.1	6.3	7.2	7.8
-40~-20	5.0	6.0	6.2	6.6	7.5	8.3
-20~0	5.1	6.0	6.4	6.7	7.5	8.5
0~20	5.3	6.1	6.7	6.9	7.7	8.6
20~40	5.5	6.4	7.0	7.3	8.1	8.9
40~60	5.7	6.8	7.1	7.4	8.4	9.4
60~80	5.7	6.9	7.2	7.5	8.5	9.6
80~100	5.9	6.9	7.3	7.8	8.8	9.8
100~120	5.9	7.0	7.4	8.0	9.1	9.9
120~140	6.0	7.2	7.6	8.1	9.2	10.3

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2428	P' _{s,t}	0.2399
P _{C,s}	0.5016	P' _{C',s}	0.5418
P _{d,C}	0.2969	P' _{d,C'}	0.2471
P _{e,d}	0.2375	P' _{e,d}	0.2347
P _{g,F}	0.5699	P' _{g,F'}	0.5049
P _{i,h}	0.8616	P' _{i,h}	0.8513

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0050	ΔP _{C,s}	0.0030
ΔP _{F,e}	-0.0016	ΔP _{g,F}	-0.0060

热性质 Thermal Properties	
T _g (℃)	546
T _g (℃)	582
T ₁₀ ^{14.5} (℃)	506
T ₁₀ ¹³ (℃)	538
T ₁₀ ^{7.6} (℃)	644
α _{-30/70℃} (10 ⁻⁷ /K)	66
α _{100/300℃} (10 ⁻⁷ /K)	83
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	6
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	662
F _A	109
E(10 ⁷ Pa)	11506
G(10 ⁷ Pa)	4427
μ	0.3
B(10 ⁻¹² /Pa)	1.98

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.870	0.750
2200	0.961	0.924
2000	0.984	0.969
1800	0.996	0.992
1600	0.999	0.998
1400	0.998	0.996
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
700	0.998	0.997
650	0.998	0.996
600	0.997	0.995
550	0.997	0.995
500	0.995	0.990
480	0.992	0.985
460	0.990	0.980
440	0.986	0.972
420	0.980	0.961
400	0.968	0.937
390	0.955	0.913
380	0.933	0.870
370	0.890	0.790
360	0.800	0.640
350	0.610	0.380
340	0.280	0.080
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	400/340
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.56

退火增值系数 ECFA.	
β	140

备注 Remarks
*:退火速率 anneal rate 4℃/h

D-ZLaF52S ₋₂₅	809410	n _d = 1.80882	v _d = 40.97	n _F -n _C = 0.01974
		n _e = 1.81351	v _e = 40.71	n _F -n _{C'} = 0.01998

折射率 Refractive Index*		
	λ(nm)	
n _{2325.4}	2325.4	1.76400
n _{1970.1}	1970.1	1.77087
n _{1529.6}	1529.6	1.77843
n _{1060.0}	1060.0	1.78717
n _t	1014.0	1.78826
n _s	852.1	1.78826
n _r	706.5	1.79970
n _C	656.3	1.80296
n _{C'}	643.9	1.80388
n _{He-Ne}	632.8	1.80475
n _D	589.3	1.80865
n _d	587.6	1.80882
n _e	546.1	1.81351
n _F	486.1	1.82270
n _{F'}	480.0	1.82386
n _g	435.8	1.83396
n _h	404.7	1.84357
n _i	365.0	1.86058
n _{313.2}	313.2	
n _{302.2}	302.2	

色散公式常数 Constants of Dispersion Formula	
K ₁	1.85743559E+000
L ₁	9.62363637E-003
K ₂	3.23469816E-001
L ₂	3.98398385E-002
K ₃	1.28949460E+000
L ₃	9.84654718E+001

折射率温度系数常数 Constants of dn/dt	
D ₀	5.23E-06
D ₁	1.56E-08
D ₂	-3.55E-11
E ₀	8.33E-07
E ₁	7.37E-10
λ _{TK} (μm)	2.17E-01

折射率温度系数 Temperature Coefficients of Refractive Index						
温度范围 (℃) Rang of Temperature	dn/dt relative (10 ⁻⁶ /℃)					
	t	C'	d	e	F'	g
-60~-40	4.9	5.8	6.1	6.3	7.2	7.8
-40~-20	5.0	6.0	6.2	6.6	7.5	8.3
-20~0	5.1	6.0	6.4	6.7	7.5	8.5
0~20	5.3	6.1	6.7	6.9	7.7	8.6
20~40	5.5	6.4	7.0	7.3	8.1	8.9
40~60	5.7	6.8	7.1	7.4	8.4	9.4
60~80	5.7	6.9	7.2	7.5	8.5	9.6
80~100	5.9	6.9	7.3	7.8	8.8	9.8
100~120	5.9	7.0	7.4	8.0	9.1	9.9
120~140	6.0	7.2	7.6	8.1	9.2	10.3

相对部分色散 Relative Partial Dispersions			
P _{s,t}	0.2428	P' _{s,t}	0.2399
P _{C,s}	0.5016	P' _{C',s}	0.5418
P _{d,C}	0.2968	P' _{d,C'}	0.2471
P _{e,d}	0.2375	P' _{e,d}	0.2346
P _{g,F}	0.5701	P' _{g,F'}	0.5050
P _{i,h}	0.8616	P' _{i,h}	0.8513

异常色散 Abnormal Dispersions			
ΔP _{C,t}	0.0051	ΔP _{C,s}	0.0030
ΔP _{F,e}	-0.0016	ΔP _{g,F}	-0.0058

热性质 Thermal Properties	
T _g (℃)	546
T _S (℃)	582
T ₁₀ ^{14.5} (℃)	506
T ₁₀ ¹³ (℃)	538
T ₁₀ ^{7.6} (℃)	644
α _{-30/70℃} (10 ⁻⁷ /K)	66
α _{100/300℃} (10 ⁻⁷ /K)	83
λ(W/m·K)	

化学性质 Chemical Properties	
	Grade
D _W	1
D _A	6
CR	1
RC(S)	1
RA(S)	3

机械性质 Mechanical Properties	
H _K (10 ⁷ Pa)	662
F _A	109
E(10 ⁷ Pa)	11506
G(10 ⁷ Pa)	4427
μ	0.3
B(10 ⁻¹² /Pa)	1.98

内透射率 Internal Transmittance		
λ(nm)	τ5mm	τ10mm
2400	0.870	0.750
2200	0.961	0.924
2000	0.984	0.969
1800	0.996	0.992
1600	0.999	0.998
1400	0.998	0.996
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
700	0.998	0.997
650	0.998	0.996
600	0.997	0.995
550	0.997	0.995
500	0.995	0.990
480	0.992	0.985
460	0.990	0.980
440	0.986	0.972
420	0.980	0.961
400	0.968	0.937
390	0.955	0.913
380	0.933	0.870
370	0.890	0.790
360	0.800	0.640
350	0.610	0.380
340	0.280	0.080
330		
320		
310		
300		
290		
280		

着色度 Color Code	
λ ₈₀ /λ ₅	400/340
λ ₇₀ /λ ₅	

其他性质 Other Properties	
ρ(g/cm ³)	4.56

退火增值系数 ECFA.	
β	140

备注 Remarks
*:退火速率 anneal rate 25℃/h