

Оптическое стекло KF, SSK, LAK

Технические характеристики

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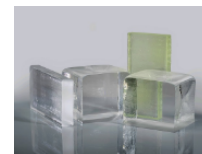
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Datasheet



N-KF9 523515.250

$n_d = 1.52346$

$v_d = 51.54$

$n_F - n_C = 0.010156$

$n_e = 1.52588$

$v_e = 51.26$

$n_F - n_C = 0.010258$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.49608
$n_{1970.1}$	1970.1	1.50095
$n_{1529.6}$	1529.6	1.50616
$n_{1060.0}$	1060.0	1.51170
n_t	1014.0	1.51234
n_s	852.1	1.51507
n_r	706.5	1.51867
n_C	656.3	1.52040
$n_{C'}$	643.8	1.52089
$n_{632.8}$	632.8	1.52134
n_D	589.3	1.52337
n_d	587.6	1.52346
n_e	546.1	1.52588
n_F	486.1	1.53056
$n_{F'}$	480.0	1.53114
n_g	435.8	1.53620
n_h	404.7	1.54096
n_i	365.0	1.54925
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.192867780
B_2	0.089334657
B_3	0.920819805
C_1	0.008391547
C_2	0.0404010786
C_3	112.57244600

Constants of Formula for dn/dT

D_0	-1.66E-06
D_1	8.44E-09
D_2	-1.01E-11
E_0	6.10E-07
E_1	6.96E-10
λ_{TK} [μm]	0.217

Temperature Coefficients of the Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	1.1	1.9	2.6	-0.9	-0.2	0.5
+20/+40	0.9	1.8	2.6	-0.4	0.4	1.3
+60/+80	0.9	1.8	2.8	-0.1	0.8	1.7

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.620	0.300
2325	0.710	0.430
1970	0.890	0.740
1530	0.992	0.981
1060	0.998	0.995
700	0.999	0.997
660	0.998	0.995
620	0.998	0.994
580	0.998	0.996
546	0.998	0.996
500	0.998	0.994
460	0.996	0.990
436	0.995	0.988
420	0.994	0.985
405	0.990	0.975
400	0.986	0.965
390	0.976	0.940
380	0.950	0.880
370	0.900	0.770
365	0.860	0.680
350	0.540	0.210
334	0.030	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80} / λ_5 37/34

Remarks

Relative Partial Dispersion P

$P_{s,t}$	0.2683
$P_{C,s}$	0.5249
$P_{d,C}$	0.3012
$P_{e,d}$	0.2380
$P_{g,F}$	0.5558
$P_{i,h}$	0.8161

Relative Partial Dispersion P'

$P'_{s,t}$	0.2657
$P'_{C,s}$	0.5669
$P'_{d,C'}$	0.2509
$P'_{e,d}$	0.2356
$P'_{g,F'}$	0.4930
$P'_{i,h}$	0.8080

Deviation of Rel. Partial Disp.

ΔP from the normal line

$\Delta P_{C,t}$	0.0038
$\Delta P_{C,s}$	0.0018
$\Delta P_{F,e}$	-0.0004
$\Delta P_{g,F}$	-0.0014
$\Delta P_{i,g}$	-0.0075

Chemical Properties

CR	1
FR	0
SR	1
AR	1
PR	1

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	9.6
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	11.0
T_g [°C]	476
T_{10}^{13} [°C]	476
$T_{10}^{7.6}$ [°C]	640
c_p [J/(g*K)]	0.860
λ [W/(m*K)]	1.040
ρ [g/cm ³]	2.50
E [10^3 N/mm ²]	66
μ	0.225
K [10^{-6} mm ² /N]	2.74
$HK_{0.1/20}$	480
HG	1

N-SSK2 622533.353

$n_d = 1.62229$

$v_d = 53.27$

$n_F - n_C = 0.011681$

$n_e = 1.62508$

$v_e = 52.99$

$n_F - n_C = 0.011795$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.59149
$n_{1970.1}$	1970.1	1.59685
$n_{1529.6}$	1529.6	1.60260
$n_{1060.0}$	1060.0	1.60880
n_t	1014.0	1.60953
n_s	852.1	1.61264
n_r	706.5	1.61678
n_C	656.3	1.61877
$n_{C'}$	643.8	1.61933
$n_{632.8}$	632.8	1.61985
n_D	589.3	1.62219
n_d	587.6	1.62229
n_e	546.1	1.62508
n_F	486.1	1.63045
$n_{F'}$	480.0	1.63112
n_g	435.8	1.63691
n_h	404.7	1.64232
n_i	365.0	1.65166
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.430602700
B_2	0.153150554
B_3	1.013909040
C_1	0.008239830
C_2	0.0333736841
C_3	106.87082200

Constants of Formula for dn/dT

D_0	5.21E-06
D_1	1.34E-08
D_2	-1.01E-11
E_0	5.21E-07
E_1	5.87E-10
λ_{TK} [μm]	0.199

Temperature Coefficients of the Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	4.2	5.0	5.8	2.1	2.8	3.5
+20/+40	4.3	5.2	6.1	2.9	3.8	4.6
+60/+80	4.5	5.5	6.4	3.5	4.4	5.3

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.760	0.500
2325	0.880	0.720
1970	0.971	0.930
1530	0.992	0.981
1060	0.997	0.992
700	0.998	0.996
660	0.998	0.994
620	0.997	0.993
580	0.998	0.995
546	0.998	0.995
500	0.997	0.992
460	0.994	0.985
436	0.992	0.980
420	0.990	0.975
405	0.985	0.963
400	0.981	0.954
390	0.967	0.920
380	0.940	0.860
370	0.890	0.750
365	0.850	0.670
350	0.570	0.250
334	0.080	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80} / λ_5 37/33

Remarks

i-line glass

Relative Partial Dispersion P

$P_{s,t}$	0.2661
$P_{C,s}$	0.5246
$P_{d,C}$	0.3016
$P_{e,d}$	0.2381
$P_{g,F}$	0.5526
$P_{i,h}$	0.7997

Relative Partial Dispersion P'

$P'_{s,t}$	0.2636
$P'_{C,s}$	0.5669
$P'_{d,C'}$	0.2513
$P'_{e,d}$	0.2358
$P'_{g,F'}$	0.4902
$P'_{i,h}$	0.7920

Deviation of Rel. Partial Disp.

ΔP from the normal line

$\Delta P_{C,t}$	-0.0069
$\Delta P_{C,s}$	-0.0025
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	-0.0016
$\Delta P_{i,g}$	-0.0146

Chemical Properties

CR	1
FR	0
SR	1.2
AR	1
PR	1

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	5.8
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	6.7
T_g [°C]	653
T_{10}^{13} [°C]	655
$T_{10}^{7.6}$ [°C]	801
c_p [J/(g·K)]	0.580
λ [W/(m·K)]	0.810
ρ [g/cm ³]	3.53
E [10^3 N/mm ²]	82
μ	0.261
K [10^{-6} mm ² /N]	2.51
$HK_{0.1/20}$	570
HG	3

N-SSK5 658509.371

$n_d = 1.65844$

$v_d = 50.88$

$n_F - n_C = 0.012940$

$n_e = 1.66152$

$v_e = 50.59$

$n_F - n_C = 0.013075$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.62581
$n_{1970.1}$	1970.1	1.63128
$n_{1529.6}$	1529.6	1.63720
$n_{1060.0}$	1060.0	1.64371
n_t	1014.0	1.64450
n_s	852.1	1.64785
n_r	706.5	1.65237
n_C	656.3	1.65455
$n_{C'}$	643.8	1.65517
$n_{632.8}$	632.8	1.65574
n_D	589.3	1.65833
n_d	587.6	1.65844
n_e	546.1	1.66152
n_F	486.1	1.66749
$n_{F'}$	480.0	1.66824
n_g	435.8	1.67471
n_h	404.7	1.68079
n_i	365.0	1.69139
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.592226590
B_2	0.103520774
B_3	1.051740160
C_1	0.009202846
C_2	0.0423530072
C_3	106.92737400

Constants of Formula for dn/dT

D_0	7.29E-07
D_1	1.17E-08
D_2	-1.50E-11
E_0	6.08E-07
E_1	7.66E-10
λ_{TK} [μm]	0.189

Temperature Coefficients of the Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	2.2	3.0	3.9	0.0	0.8	1.6
+20/+40	2.2	3.2	4.2	0.8	1.8	2.7
+60/+80	2.4	3.5	4.5	1.2	2.3	3.4

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.730	0.450
2325	0.850	0.660
1970	0.963	0.910
1530	0.992	0.980
1060	0.996	0.990
700	0.997	0.993
660	0.997	0.992
620	0.997	0.992
580	0.997	0.993
546	0.996	0.990
500	0.993	0.982
460	0.987	0.968
436	0.982	0.956
420	0.976	0.940
405	0.963	0.910
400	0.959	0.900
390	0.940	0.860
380	0.900	0.760
370	0.800	0.580
365	0.730	0.450
350	0.340	0.060
334	0.020	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80} / λ_5 38/34

Remarks

Relative Partial Dispersion P

$P_{s,t}$	0.2592
$P_{C,s}$	0.5181
$P_{d,C}$	0.3003
$P_{e,d}$	0.2380
$P_{g,F}$	0.5575
$P_{i,h}$	0.8192
Relative Partial Dispersion P'	
$P'_{s,t}$	0.2566
$P'_{C,s}$	0.5598
$P'_{d,C'}$	0.2502
$P'_{e,d}$	0.2355
$P'_{g,F'}$	0.4944
$P'_{i,h}$	0.8108

Deviation of Rel. Partial Disp.

ΔP from the normal line

$\Delta P_{C,t}$	-0.0090
$\Delta P_{C,s}$	-0.0034
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	-0.0007
$\Delta P_{i,g}$	-0.0081

Chemical Properties

CR	2
FR	3
SR	52.2
AR	2.2
PR	3.2

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	6.8
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	8.0
T_g [°C]	645
T_{10}^{13} [°C]	637
$T_{10}^{7.6}$ [°C]	751
c_p [J/(g·K)]	0.574
λ [W/(m·K)]	
ρ [g/cm ³]	3.71
E [10^3 N/mm ²]	88
μ	0.278
K [10^{-6} mm ² /N]	1.90
$HK_{0.1/20}$	590
HG	5

N-SSK8 618498.327

$n_d = 1.61773$

$v_d = 49.83$

$n_F - n_C = 0.012397$

$n_e = 1.62068$

$v_e = 49.54$

$n_F - n_C = 0.012529$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.58594
$n_{1970.1}$	1970.1	1.59137
$n_{1529.6}$	1529.6	1.59723
$n_{1060.0}$	1060.0	1.60360
n_t	1014.0	1.60436
n_s	852.1	1.60759
n_r	706.5	1.61192
n_C	656.3	1.61401
$n_{C'}$	643.8	1.61460
$n_{632.8}$	632.8	1.61515
n_D	589.3	1.61762
n_d	587.6	1.61773
n_e	546.1	1.62068
n_F	486.1	1.62641
$n_{F'}$	480.0	1.62713
n_g	435.8	1.63335
n_h	404.7	1.63923
n_i	365.0	
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.448578670
B_2	0.117965926
B_3	1.069375280
C_1	0.008693101
C_2	0.0421566593
C_3	111.30066600

Constants of Formula for dn/dT

D_0	5.34E-07
D_1	1.27E-08
D_2	-1.75E-11
E_0	5.40E-07
E_1	7.05E-10
λ_{TK} [μm]	0.224

Temperature Coefficients of the Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	1.9	2.7	3.5	-0.2	0.5	1.3
+20/+40	2.0	2.9	3.9	0.6	1.5	2.4
+60/+80	2.2	3.2	4.2	1.1	2.1	3.1

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.730	0.460
2325	0.850	0.660
1970	0.959	0.900
1530	0.992	0.980
1060	0.997	0.993
700	0.998	0.994
660	0.996	0.991
620	0.996	0.990
580	0.997	0.992
546	0.997	0.992
500	0.994	0.984
460	0.987	0.969
436	0.982	0.955
420	0.975	0.940
405	0.959	0.900
400	0.950	0.880
390	0.920	0.810
380	0.850	0.660
370	0.730	0.450
365	0.630	0.310
350	0.190	0.010
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

λ_{80} / λ_5 39/35

Remarks

Relative Partial Dispersion P

$P_{s,t}$	0.2606
$P_{C,s}$	0.5179
$P_{d,C}$	0.2999
$P_{e,d}$	0.2378
$P_{g,F}$	0.5602
$P_{i,h}$	

Relative Partial Dispersion P'

$P'_{s,t}$	0.2579
$P'_{C,s}$	0.5594
$P'_{d,C'}$	0.2498
$P'_{e,d}$	0.2353
$P'_{g,F'}$	0.4967
$P'_{i,h}$	

Deviation of Rel. Partial Disp.

ΔP from the normal line

$\Delta P_{C,t}$	-0.0028
$\Delta P_{C,s}$	-0.0012
$\Delta P_{F,e}$	0.0001
$\Delta P_{g,F}$	0.0002
$\Delta P_{i,g}$	

Chemical Properties

CR	1
FR	0
SR	1
AR	1.3
PR	1

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	7.2
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	8.2
T_g [°C]	616
T_{10}^{13} [°C]	604
$T_{10}^{7.6}$ [°C]	742
c_p [J/(g·K)]	0.640
λ [W/(m·K)]	0.840
ρ [g/cm ³]	3.27
E [10^3 N/mm ²]	84
μ	0.251
K [10^{-6} mm ² /N]	2.36
$HK_{0.1/20}$	570
HG	3

N-LAK7 652585.384

$n_d = 1.65160$

$v_d = 58.52$

$n_F - n_C = 0.011135$

$n_e = 1.65425$

$v_e = 58.26$

$n_F - n_C = 0.011229$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.61875
$n_{1970.1}$	1970.1	1.62499
$n_{1529.6}$	1529.6	1.63156
$n_{1060.0}$	1060.0	1.63828
n_t	1014.0	1.63904
n_s	852.1	1.64220
n_r	706.5	1.64628
n_C	656.3	1.64821
$n_{C'}$	643.8	1.64875
$n_{632.8}$	632.8	1.64925
n_D	589.3	1.65150
n_d	587.6	1.65160
n_e	546.1	1.65425
n_F	486.1	1.65934
$n_{F'}$	480.0	1.65998
n_g	435.8	1.66539
n_h	404.7	1.67042
n_i	365.0	1.67897
$n_{334.1}$	334.1	1.68820
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.236798890
B_2	0.445051837
B_3	1.017458880
C_1	0.006101055
C_2	0.0201388334
C_3	90.63803800

Constants of Formula for dn/dT

D_0	-3.40E-06
D_1	1.17E-08
D_2	2.38E-11
E_0	4.96E-07
E_1	4.44E-10
λ_{TK} [μm]	0.107

Temperature Coefficients of the Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	0.2	0.8	1.3	-2.0	-1.5	-1.0
+20/+40	0.0	0.7	1.3	-1.4	-0.7	-0.2
+60/+80	0.3	1.0	1.7	-0.8	-0.1	0.5

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.550	0.220
2325	0.750	0.490
1970	0.940	0.860
1530	0.989	0.972
1060	0.999	0.998
700	0.999	0.997
660	0.998	0.996
620	0.998	0.995
580	0.998	0.995
546	0.998	0.995
500	0.997	0.992
460	0.994	0.984
436	0.992	0.980
420	0.991	0.977
405	0.989	0.973
400	0.988	0.970
390	0.984	0.961
380	0.978	0.950
370	0.966	0.920
365	0.956	0.890
350	0.910	0.790
334	0.800	0.570
320	0.620	0.300
310	0.420	0.110
300	0.190	0.020
290	0.050	0.000
280	0.000	
270		
260		
250		

Color Code

$\lambda_{80} / \lambda_{5}$ 35/29

Remarks

Relative Partial Dispersion P

$P_{s,t}$	0.2835
$P_{C,s}$	0.5400
$P_{d,C}$	0.3044
$P_{e,d}$	0.2385
$P_{g,F}$	0.5433
$P_{i,h}$	0.7687

Relative Partial Dispersion P'

$P'_{s,t}$	0.2812
$P'_{C,s}$	0.5836
$P'_{d,C'}$	0.2538
$P'_{e,d}$	0.2365
$P'_{g,F'}$	0.4823
$P'_{i,h}$	0.7622

Deviation of Rel. Partial Disp.

ΔP from the normal line

$\Delta P_{C,t}$	0.0010
$\Delta P_{C,s}$	0.0007
$\Delta P_{F,e}$	-0.0005
$\Delta P_{g,F}$	-0.0021
$\Delta P_{i,g}$	-0.0140

Chemical Properties

CR	3
FR	2
SR	53.3
AR	3.3
PR	4.3

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	7.1
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	8.2
T_g [°C]	618
T_{10}^{13} [°C]	626
$T_{10}^{7.6}$ [°C]	716
c_p [J/(g·K)]	0.530
λ [W/(m·K)]	0.740
ρ [g/cm ³]	3.84
E [10^3 N/mm ²]	90
μ	0.277
K [10^{-6} mm ² /N]	1.65
$HK_{0.1/20}$	600
HG	5

N-LAK8 713538.375

$n_d = 1.71300$
 $n_e = 1.71616$

$v_d = 53.83$
 $v_e = 53.61$

$n_F - n_C = 0.013245$
 $n_{F'} - n_{C'} = 0.013359$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.67294
$n_{1970.1}$	1970.1	1.68075
$n_{1529.6}$	1529.6	1.68890
$n_{1060.0}$	1060.0	1.69710
n_t	1014.0	1.69802
n_s	852.1	1.70181
n_r	706.5	1.70668
n_C	656.3	1.70897
$n_{C'}$	643.8	1.70962
$n_{632.8}$	632.8	1.71022
n_D	589.3	1.71289
n_d	587.6	1.71300
n_e	546.1	1.71616
n_F	486.1	1.72222
$n_{F'}$	480.0	1.72297
n_g	435.8	1.72944
n_h	404.7	1.73545
n_i	365.0	1.74573
$n_{334.1}$	334.1	1.75687
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.331831670
B_2	0.546623206
B_3	1.190840150
C_1	0.006200239
C_2	0.0216465439
C_3	82.58277360

Constants of Formula for dn/dT

D_0	4.10E-06
D_1	1.25E-08
D_2	-1.60E-11
E_0	4.30E-07
E_1	6.29E-10
λ_{TK} [μm]	0.213

Temperature Coefficients of the Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	4.0	4.7	5.4	1.7	2.4	3.0
+20/+40	4.1	5.0	5.8	2.6	3.5	4.3
+60/+80	4.3	5.2	6.2	3.1	4.1	5.0

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.400	0.100
2325	0.710	0.420
1970	0.950	0.880
1530	0.992	0.979
1060	0.998	0.994
700	0.998	0.996
660	0.998	0.995
620	0.998	0.994
580	0.998	0.994
546	0.998	0.995
500	0.998	0.994
460	0.995	0.987
436	0.992	0.979
420	0.988	0.970
405	0.981	0.952
400	0.977	0.940
390	0.965	0.920
380	0.950	0.870
370	0.910	0.780
365	0.880	0.720
350	0.740	0.470
334	0.510	0.190
320	0.280	0.040
310	0.140	0.010
300	0.040	
290	0.010	
280		
270		
260		
250		

Color Code

λ_{80} / λ_5 37/30

Remarks

Relative Partial Dispersion P

$P_{s,t}$	0.2861
$P_{C,s}$	0.5408
$P_{d,C}$	0.3042
$P_{e,d}$	0.2383
$P_{g,F}$	0.5450
$P_{i,h}$	0.7764

Relative Partial Dispersion P'

$P'_{s,t}$	0.2836
$P'_{C,s}$	0.5843
$P'_{d,C'}$	0.2536
$P'_{e,d}$	0.2363
$P'_{g,F'}$	0.4838
$P'_{i,h}$	0.7698

Deviation of Rel. Partial Disp.

ΔP from the normal line

$\Delta P_{C,t}$	0.0266
$\Delta P_{C,s}$	0.0124
$\Delta P_{F,e}$	-0.0026
$\Delta P_{g,F}$	-0.0083
$\Delta P_{i,g}$	-0.0428

Chemical Properties

CR	3
FR	2
SR	52.3
AR	1
PR	3.3

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	5.6
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	6.7
T_g [°C]	643
T_{10}^{13} [°C]	635
$T_{10}^{7.6}$ [°C]	717
c_p [J/(g·K)]	0.620
λ [W/(m·K)]	0.840
ρ [g/cm ³]	3.75
E [10^3 N/mm ²]	115
μ	0.289
K [10^{-6} mm ² /N]	1.81
$HK_{0.1/20}$	740
HG	2

N-LAK9 691547.351

$n_d = 1.69100$
 $n_e = 1.69401$

$v_d = 54.71$
 $v_e = 54.48$

$n_F - n_C = 0.012631$
 $n_{F'} - n_{C'} = 0.012738$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.65294
$n_{1970.1}$	1970.1	1.66032
$n_{1529.6}$	1529.6	1.66804
$n_{1060.0}$	1060.0	1.67584
n_t	1014.0	1.67672
n_s	852.1	1.68033
n_r	706.5	1.68497
n_C	656.3	1.68716
$n_{C'}$	643.8	1.68777
$n_{632.8}$	632.8	1.68834
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	1.70667
n_h	404.7	1.71239
n_i	365.0	1.72219
$n_{334.1}$	334.1	1.73281
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.462319050
B_2	0.344399589
B_3	1.155083720
C_1	0.007242702
C_2	0.0243353131
C_3	85.46868680

Constants of Formula for dn/dT

D_0	2.11E-06
D_1	1.11E-08
D_2	1.82E-12
E_0	4.74E-07
E_1	-3.47E-10
λ_{TK} [μm]	0.146

Temperature Coefficients of the Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	3.0	3.9	4.6	0.8	1.6	2.3
+20/+40	2.9	3.7	4.4	1.5	2.2	2.9
+60/+80	3.1	3.8	4.4	2.0	2.7	3.3

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.460	0.140
2325	0.710	0.420
1970	0.940	0.860
1530	0.986	0.966
1060	0.998	0.995
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.994
546	0.998	0.994
500	0.997	0.992
460	0.994	0.984
436	0.991	0.977
420	0.988	0.970
405	0.983	0.957
400	0.980	0.950
390	0.971	0.930
380	0.954	0.890
370	0.930	0.830
365	0.910	0.780
350	0.790	0.550
334	0.530	0.200
320	0.210	0.020
310	0.070	0.000
300	0.010	
290	0.000	
280	0.000	
270		
260		
250		

Color Code

λ_{80} / λ_5 37/31

Remarks

step 0.5 available

Relative Partial Dispersion P

$P_{s,t}$	0.2859
$P_{C,s}$	0.5409
$P_{d,C}$	0.3043
$P_{e,d}$	0.2384
$P_{g,F}$	0.5447
$P_{i,h}$	0.7756

Relative Partial Dispersion P'

$P'_{s,t}$	0.2834
$P'_{C,s}$	0.5844
$P'_{d,C'}$	0.2536
$P'_{e,d}$	0.2363
$P'_{g,F'}$	0.4835
$P'_{i,h}$	0.7690

Deviation of Rel. Partial Disp.

ΔP from the normal line

$\Delta P_{C,t}$	0.0223
$\Delta P_{C,s}$	0.0105
$\Delta P_{F,e}$	-0.0023
$\Delta P_{g,F}$	-0.0071
$\Delta P_{i,g}$	-0.0367

Chemical Properties

CR	3
FR	3
SR	52
AR	1.2
PR	4.3

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	6.3
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	7.5
T_g [°C]	656
T_{10}^{13} [°C]	645
$T_{10}^{7.6}$ [°C]	722
c_p [J/(g·K)]	0.649
λ [W/(m·K)]	0.908
ρ [g/cm ³]	3.51
E [10^3 N/mm ²]	110
μ	0.285
K [10^{-6} mm ² /N]	1.83
$HK_{0.1/20}$	700
HG	3

N-LAK10 720506.369

$n_d = 1.72003$

$v_d = 50.62$

$n_F - n_C = 0.014224$

$n_e = 1.72341$

$v_e = 50.39$

$n_F - n_C = 0.014357$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.67890
$n_{1970.1}$	1970.1	1.68670
$n_{1529.6}$	1529.6	1.69488
$n_{1060.0}$	1060.0	1.70324
n_t	1014.0	1.70419
n_s	852.1	1.70815
n_r	706.5	1.71328
n_C	656.3	1.71572
$n_{C'}$	643.8	1.71641
$n_{632.8}$	632.8	1.71705
n_D	589.3	1.71990
n_d	587.6	1.72003
n_e	546.1	1.72341
n_F	486.1	1.72995
$n_{F'}$	480.0	1.73077
n_g	435.8	1.73779
n_h	404.7	1.74438
n_i	365.0	1.75578
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.728780170
B_2	0.169257825
B_3	1.193869560
C_1	0.008860146
C_2	0.0363416509
C_3	82.90090690

Constants of Formula for dn/dT

D_0	4.10E-06
D_1	1.23E-08
D_2	-7.85E-12
E_0	5.08E-07
E_1	5.76E-10
λ_{TK} [μm]	0.205

Temperature Coefficients of the Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	4.1	5.0	5.8	1.8	2.6	3.4
+20/+40	4.2	5.1	6.1	2.7	3.6	4.6
+60/+80	4.4	5.4	6.5	3.2	4.3	5.3

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.430	0.120
2325	0.720	0.440
1970	0.950	0.880
1530	0.991	0.977
1060	0.998	0.995
700	0.998	0.995
660	0.998	0.994
620	0.998	0.994
580	0.997	0.993
546	0.998	0.994
500	0.995	0.988
460	0.991	0.977
436	0.988	0.970
420	0.980	0.951
405	0.970	0.930
400	0.964	0.910
390	0.950	0.880
380	0.920	0.810
370	0.860	0.690
365	0.800	0.580
350	0.500	0.180
334	0.060	
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

$\lambda_{80} / \lambda_{5}$ 38/33

Remarks

Relative Partial Dispersion P

$P_{s,t}$	0.2779
$P_{C,s}$	0.5328
$P_{d,C}$	0.3025
$P_{e,d}$	0.2381
$P_{g,F}$	0.5515
$P_{i,h}$	0.8015

Relative Partial Dispersion P'

$P'_{s,t}$	0.2753
$P'_{C,s}$	0.5755
$P'_{d,C'}$	0.2521
$P'_{e,d}$	0.2359
$P'_{g,F'}$	0.4894
$P'_{i,h}$	0.7941

Deviation of Rel. Partial Disp.

ΔP from the normal line

$\Delta P_{C,t}$	0.0256
$\Delta P_{C,s}$	0.0119
$\Delta P_{F,e}$	-0.0024
$\Delta P_{g,F}$	-0.0072
$\Delta P_{i,g}$	-0.0354

Chemical Properties

CR	2
FR	2
SR	52.3
AR	1
PR	3

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	5.7
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	6.8
T_g [°C]	636
T_{10}^{13} [°C]	631
$T_{10}^{7.6}$ [°C]	714
c_p [J/(g·K)]	0.640
λ [W/(m·K)]	0.860
ρ [g/cm ³]	3.69
E [10^3 N/mm ²]	116
μ	0.286
K [10^{-6} mm ² /N]	1.97
$HK_{0.1/20}$	780
HG	2

N-LAK12 678552.410

$n_d = 1.67790$

$v_d = 55.20$

$n_F - n_C = 0.012281$

$n_e = 1.68083$

$v_e = 54.92$

$n_F - n_C = 0.012396$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.64541
$n_{1970.1}$	1970.1	1.65107
$n_{1529.6}$	1529.6	1.65713
$n_{1060.0}$	1060.0	1.66366
n_t	1014.0	1.66443
n_s	852.1	1.66772
n_r	706.5	1.67209
n_C	656.3	1.67419
$n_{C'}$	643.8	1.67478
$n_{632.8}$	632.8	1.67533
n_D	589.3	1.67779
n_d	587.6	1.67790
n_e	546.1	1.68083
n_F	486.1	1.68647
$n_{F'}$	480.0	1.68717
n_g	435.8	1.69320
n_h	404.7	1.69882
n_i	365.0	1.70842
$n_{334.1}$	334.1	1.71881
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.173657040
B_2	0.588992398
B_3	0.978014394
C_1	0.005770318
C_2	0.0200401678
C_3	95.48734820

Constants of Formula for dn/dT

D_0	-5.67E-06
D_1	8.27E-09
D_2	1.27E-12
E_0	5.25E-07
E_1	6.30E-10
λ_{TK} [μm]	0.162

Temperature Coefficients of the Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	-1.0	-0.3	0.3	-3.2	-2.6	-2.0
+20/+40	-1.2	-0.4	0.3	-2.7	-1.9	-1.2
+60/+80	-1.2	-0.3	0.5	-2.3	-1.5	-0.7

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.590	0.270
2325	0.760	0.510
1970	0.940	0.850
1530	0.990	0.975
1060	0.997	0.992
700	0.997	0.993
660	0.996	0.989
620	0.995	0.988
580	0.996	0.990
546	0.996	0.991
500	0.994	0.986
460	0.987	0.968
436	0.983	0.958
420	0.981	0.952
405	0.977	0.940
400	0.976	0.940
390	0.967	0.920
380	0.950	0.870
370	0.910	0.790
365	0.880	0.730
350	0.730	0.460
334	0.470	0.150
320	0.150	0.010
310	0.030	
300		
290		
280		
270		
260		
250		

Color Code

$\lambda_{80} / \lambda_{5}$ 37/31

Remarks

Relative Partial Dispersion P

$P_{s,t}$	0.2673
$P_{C,s}$	0.5269
$P_{d,C}$	0.3024
$P_{e,d}$	0.2383
$P_{g,F}$	0.5485
$P_{i,h}$	0.7818

Relative Partial Dispersion P'

$P'_{s,t}$	0.2648
$P'_{C,s}$	0.5695
$P'_{d,C'}$	0.2521
$P'_{e,d}$	0.2361
$P'_{g,F'}$	0.4866
$P'_{i,h}$	0.7746

Deviation of Rel. Partial Disp.

ΔP from the normal line

$\Delta P_{C,t}$	-0.0126
$\Delta P_{C,s}$	-0.0047
$\Delta P_{F,e}$	-0.0001
$\Delta P_{g,F}$	-0.0024
$\Delta P_{i,g}$	-0.0226

Chemical Properties

CR	3
FR	1
SR	53.3
AR	3.3
PR	4.3

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	7.6
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	9.3
T_g [°C]	614
T_{10}^{13} [°C]	606
$T_{10}^{7.6}$ [°C]	714
c_p [J/(g·K)]	0.510
λ [W/(m·K)]	0.680
ρ [g/cm ³]	4.10
E [10^3 N/mm ²]	87
μ	0.288
K [10^{-6} mm ² /N]	1.44
$HK_{0.1/20}$	560
HG	6

N-LAK14 697554.363

$n_d = 1.69680$

$v_d = 55.41$

$n_F - n_C = 0.012575$

$n_e = 1.69980$

$v_e = 55.19$

$n_F - n_C = 0.012679$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.65783
$n_{1970.1}$	1970.1	1.66554
$n_{1529.6}$	1529.6	1.67357
$n_{1060.0}$	1060.0	1.68157
n_t	1014.0	1.68246
n_s	852.1	1.68612
n_r	706.5	1.69077
n_C	656.3	1.69297
$n_{C'}$	643.8	1.69358
$n_{632.8}$	632.8	1.69415
n_D	589.3	1.69669
n_d	587.6	1.69680
n_e	546.1	1.69980
n_F	486.1	1.70554
$n_{F'}$	480.0	1.70626
n_g	435.8	1.71237
n_h	404.7	1.71804
n_i	365.0	1.72772
$n_{334.1}$	334.1	1.73819
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.507812120
B_2	0.318866829
B_3	1.142872130
C_1	0.007460987
C_2	0.0242024834
C_3	80.95651650

Constants of Formula for dn/dT

D_0	2.68E-06
D_1	1.15E-08
D_2	-1.44E-11
E_0	3.72E-07
E_1	5.53E-10
λ_{TK} [μm]	0.226

Temperature Coefficients of the Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	3.2	3.8	4.4	0.9	1.5	2.1
+20/+40	3.2	4.0	4.7	1.8	2.5	3.2
+60/+80	3.4	4.2	5.0	2.2	3.0	3.8

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.380	0.090
2325	0.670	0.370
1970	0.930	0.840
1530	0.984	0.960
1060	0.998	0.995
700	0.998	0.995
660	0.998	0.994
620	0.997	0.992
580	0.997	0.993
546	0.998	0.995
500	0.997	0.992
460	0.994	0.984
436	0.991	0.977
420	0.988	0.971
405	0.984	0.960
400	0.981	0.953
390	0.971	0.930
380	0.959	0.900
370	0.930	0.840
365	0.910	0.800
350	0.820	0.610
334	0.640	0.330
320	0.430	0.120
310	0.240	0.040
300	0.090	0.000
290	0.020	
280	0.000	
270		
260		
250		

Color Code

λ_{80} / λ_5 36/27

Remarks

Relative Partial Dispersion P

$P_{s,t}$	0.2903
$P_{C,s}$	0.5447
$P_{d,C}$	0.3049
$P_{e,d}$	0.2384
$P_{g,F}$	0.5427
$P_{i,h}$	0.7701

Relative Partial Dispersion P'

$P'_{s,t}$	0.2880
$P'_{C,s}$	0.5885
$P'_{d,C'}$	0.2542
$P'_{e,d}$	0.2365
$P'_{g,F'}$	0.4819
$P'_{i,h}$	0.7638

Deviation of Rel. Partial Disp.

ΔP from the normal line

$\Delta P_{C,t}$	0.0273
$\Delta P_{C,s}$	0.0127
$\Delta P_{F,e}$	-0.0026
$\Delta P_{g,F}$	-0.0079
$\Delta P_{i,g}$	-0.0386

Chemical Properties

CR	3
FR	2
SR	52.3
AR	1
PR	3

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	5.5
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	6.9
T_g [°C]	661
T_{10}^{13} [°C]	653
$T_{10}^{7.6}$ [°C]	734
c_p [J/(g·K)]	0.630
λ [W/(m·K)]	0.890
ρ [g/cm ³]	3.63
E [10^3 N/mm ²]	111
μ	0.283
K [10^{-6} mm ² /N]	1.73
$HK_{0.1/20}$	730
HG	2

N-LAK21 640601.374

$n_d = 1.64049$

$v_d = 60.10$

$n_F - n_C = 0.010657$

$n_e = 1.64304$

$v_e = 59.86$

$n_F - n_C = 0.010743$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.60776
$n_{1970.1}$	1970.1	1.61416
$n_{1529.6}$	1529.6	1.62086
$n_{1060.0}$	1060.0	1.62759
n_t	1014.0	1.62834
n_s	852.1	1.63143
n_r	706.5	1.63538
n_C	656.3	1.63724
$n_{C'}$	643.8	1.63776
$n_{632.8}$	632.8	1.63825
n_D	589.3	1.64040
n_d	587.6	1.64049
n_e	546.1	1.64304
n_F	486.1	1.64790
$n_{F'}$	480.0	1.64850
n_g	435.8	1.65366
n_h	404.7	1.65844
n_i	365.0	1.66657
$n_{334.1}$	334.1	1.67532
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.227181160
B_2	0.420783743
B_3	1.012848430
C_1	0.006020757
C_2	0.0196862889
C_3	88.43700990

Constants of Formula for dn/dT

D_0	-2.36E-06
D_1	1.15E-08
D_2	1.11E-11
E_0	3.10E-07
E_1	2.78E-10
λ_{TK} [μm]	0.234

Temperature Coefficients of the Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/\text{K}$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/\text{K}$]		
	1060.0	e	g	1060.0	e	g
-40/-20	0.6	1.1	1.6	-1.6	-1.2	-0.7
+20/+40	0.5	1.0	1.6	-0.9	-0.4	0.1
+60/+80	0.7	1.3	1.9	-0.4	0.1	0.7

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.540	0.210
2325	0.750	0.490
1970	0.950	0.870
1530	0.988	0.970
1060	0.998	0.994
700	0.998	0.994
660	0.996	0.991
620	0.996	0.990
580	0.997	0.992
546	0.997	0.992
500	0.995	0.988
460	0.990	0.976
436	0.987	0.969
420	0.985	0.963
405	0.982	0.955
400	0.979	0.950
390	0.971	0.930
380	0.959	0.900
370	0.930	0.830
365	0.910	0.780
350	0.800	0.570
334	0.570	0.240
320	0.250	0.040
310	0.060	
300		
290		
280		
270		
260		
250		

Color Code

λ_{80} / λ_5 37/31

Remarks

Relative Partial Dispersion P

$P_{s,t}$	0.2900
$P_{C,s}$	0.5453
$P_{d,C}$	0.3052
$P_{e,d}$	0.2385
$P_{g,F}$	0.5411
$P_{i,h}$	0.7630

Relative Partial Dispersion P'

$P'_{s,t}$	0.2877
$P'_{C,s}$	0.5892
$P'_{d,C'}$	0.2545
$P'_{e,d}$	0.2366
$P'_{g,F'}$	0.4804
$P'_{i,h}$	0.7569

Deviation of Rel. Partial Disp.

ΔP from the normal line

$\Delta P_{C,t}$	0.0052
$\Delta P_{C,s}$	0.0023
$\Delta P_{F,e}$	-0.0005
$\Delta P_{g,F}$	-0.0017
$\Delta P_{i,g}$	-0.0090

Chemical Properties

CR	4
FR	2
SR	53.2
AR	4.3
PR	4.3

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/\text{K}$]	6.8
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/\text{K}$]	8.1
T_g [°C]	639
T_{10}^{13} [°C]	627
$T_{10}^{7.6}$ [°C]	716
c_p [J/(g·K)]	0.590
λ [W/(m·K)]	0.880
ρ [g/cm ³]	3.74
E [10^3 N/mm ²]	91
μ	0.272
K [10^{-6} mm ² /N]	1.74
HK _{0.1/20}	600
HG	5

N-LAK22 651559.377

$n_d = 1.65113$

$v_d = 55.89$

$n_F - n_C = 0.011650$

$n_e = 1.65391$

$v_e = 55.63$

$n_F - n_C = 0.011755$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.61915
$n_{1970.1}$	1970.1	1.62488
$n_{1529.6}$	1529.6	1.63100
$n_{1060.0}$	1060.0	1.63747
n_t	1014.0	1.63823
n_s	852.1	1.64141
n_r	706.5	1.64560
n_C	656.3	1.64760
$n_{C'}$	643.8	1.64816
$n_{632.8}$	632.8	1.64868
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	1.66562
n_h	404.7	1.67092
n_i	365.0	1.67997
$n_{334.1}$	334.1	1.68975
$n_{312.6}$	312.6	1.69876
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.142297810
B_2	0.535138441
B_3	1.040883850
C_1	0.005857786
C_2	0.0198546147
C_3	100.83401700

Constants of Formula for dn/dT

D_0	1.36E-06
D_1	1.49E-08
D_2	-1.29E-11
E_0	3.41E-07
E_1	2.09E-10
λ_{TK} [μm]	0.262

Temperature Coefficients of the Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	2.2	2.9	3.6	0.0	0.6	1.3
+20/+40	2.4	3.1	3.9	1.0	1.7	2.4
+60/+80	2.7	3.4	4.2	1.6	2.3	3.1

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.71	0.43
2325	0.85	0.67
1970	0.967	0.92
1530	0.994	0.986
1060	0.999	0.998
700	0.998	0.996
660	0.998	0.995
620	0.998	0.995
580	0.998	0.995
546	0.998	0.995
500	0.996	0.991
460	0.994	0.986
436	0.993	0.983
420	0.993	0.982
405	0.992	0.979
400	0.991	0.977
390	0.989	0.972
380	0.985	0.963
370	0.978	0.95
365	0.973	0.93
350	0.95	0.87
334	0.89	0.74
320	0.77	0.52
310	0.63	0.31
300	0.43	0.12
290	0.21	0.02
280	0.11	0.00
270		
260		
250		

Color Code

$\lambda_{80} / \lambda_{5}$ 34/28

Remarks

Relative Partial Dispersion P

$P_{s,t}$	0.2729
$P_{C,s}$	0.5314
$P_{d,C}$	0.3031
$P_{e,d}$	0.2384
$P_{g,F}$	0.5467
$P_{i,h}$	0.7771

Relative Partial Dispersion P'

$P'_{s,t}$	0.2704
$P'_{C,s}$	0.5744
$P'_{d,C'}$	0.2527
$P'_{e,d}$	0.2362
$P'_{g,F'}$	0.4851
$P'_{i,h}$	0.7702

Deviation of Rel. Partial Disp.

ΔP from the normal line

$\Delta P_{C,t}$	-0.0058
$\Delta P_{C,s}$	-0.0018
$\Delta P_{F,e}$	-0.0005
$\Delta P_{g,F}$	-0.0031
$\Delta P_{i,g}$	-0.0236

Chemical Properties

CR	2
FR	2
SR	51.2
AR	1
PR	2.3

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	6.6
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	7.4
T_g [°C]	689
T_{10}^{13} [°C]	673
$T_{10}^{7.6}$ [°C]	
c_p [J/(g·K)]	0.540
λ [W/(m·K)]	0.750
ρ [g/cm ³]	3.77
E [10^3 N/mm ²]	90
μ	0.266
K [10^{-6} mm ² /N]	1.82
HK _{0.1/20}	600
HG	4

N-LAK28 744508.409

$n_d = 1.74429$
 $n_e = 1.74778$

$v_d = 50.77$
 $v_e = 50.54$

$n_F - n_C = 0.014660$
 $n_P - n_C = 0.014797$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.70318
$n_{1970.1}$	1970.1	1.71077
$n_{1529.6}$	1529.6	1.71877
$n_{1060.0}$	1060.0	1.72709
n_t	1014.0	1.72805
n_s	852.1	1.73207
n_r	706.5	1.73734
n_C	656.3	1.73985
$n_{C'}$	643.8	1.74056
$n_{632.8}$	632.8	1.74121
n_D	589.3	1.74416
n_d	587.6	1.74429
n_e	546.1	1.74778
n_F	486.1	1.75451
$n_{F'}$	480.0	1.75535
n_g	435.8	1.76257
n_h	404.7	1.76931
n_i	365.0	1.78090
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.504419860
B_2	0.474120561
B_3	1.177843540
C_1	0.007196656
C_2	0.0249143227
C_3	83.14432100

Constants of Formula for dn/dT

D_0	5.01E-06
D_1	1.12E-08
D_2	-1.08E-11
E_0	4.68E-07
E_1	3.34E-10
λ_{TK} [μm]	0.226

Temperature Coefficients of the Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	4.7	5.6	6.6	2.4	3.3	4.1
+20/+40	4.7	5.7	6.7	3.3	4.2	5.2
+60/+80	4.9	5.9	7.0	3.7	4.7	5.8

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500		
2325	0.700	0.410
1970	0.950	0.880
1530	0.992	0.980
1060	0.998	0.995
700	0.998	0.994
660	0.997	0.993
620	0.997	0.993
580	0.997	0.993
546	0.998	0.994
500	0.997	0.992
460	0.992	0.980
436	0.988	0.970
420	0.980	0.950
405	0.959	0.900
400	0.950	0.870
390	0.910	0.800
380	0.850	0.670
370	0.760	0.500
365	0.690	0.390
350	0.380	0.090
334		
320		
310		
300		
290		
280		
270		
260		
250		

Color Code

$\lambda_{80} / \lambda_{5}$ 40/34

Remarks

Relative Partial Dispersion P

$P_{s,t}$	0.2740
$P_{C,s}$	0.5307
$P_{d,C}$	0.3025
$P_{e,d}$	0.2382
$P_{g,F}$	0.5499
$P_{i,h}$	0.7905

Relative Partial Dispersion P'

$P'_{s,t}$	0.2715
$P'_{C,s}$	0.5734
$P'_{d,C'}$	0.2521
$P'_{e,d}$	0.2360
$P'_{g,F'}$	0.4879
$P'_{i,h}$	0.7832

Deviation of Rel. Partial Disp.

ΔP from the normal line

$\Delta P_{C,t}$	0.0189
$\Delta P_{C,s}$	0.0095
$\Delta P_{F,e}$	-0.0024
$\Delta P_{g,F}$	-0.0085
$\Delta P_{i,g}$	-0.0484

Chemical Properties

CR	2
FR	1
SR	52.3
AR	1
PR	3.3

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	5.7
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	6.8
T_g [°C]	625
T_{10}^{13} [°C]	
$T_{10}^{7.6}$ [°C]	
c_p [J/(g·K)]	0.595
λ [W/(m·K)]	0.837
ρ [g/cm ³]	4.09
E [10^3 N/mm ²]	117
μ	0.291
K [10^{-6} mm ² /N]	1.71
$HK_{0.1/20}$	740

N-LAK33B 755523.422

$n_d = 1.75500$

$v_d = 52.30$

$n_F - n_C = 0.014436$

$n_e = 1.75844$

$v_e = 52.07$

$n_F - n_C = 0.014566$

Refractive Indices

	λ [nm]	
$n_{2325.4}$	2325.4	1.71387
$n_{1970.1}$	1970.1	1.72155
$n_{1529.6}$	1529.6	1.72962
$n_{1060.0}$	1060.0	1.73796
n_t	1014.0	1.73892
n_s	852.1	1.74292
n_r	706.5	1.74814
n_C	656.3	1.75062
$n_{C'}$	643.8	1.75132
$n_{632.8}$	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	1.76589
n_g	435.8	1.77296
n_h	404.7	1.77954
n_i	365.0	1.79082
$n_{334.1}$	334.1	1.80306
$n_{312.6}$	312.6	1.81436
$n_{296.7}$	296.7	1.82471
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula

B_1	1.422886010
B_2	0.593661336
B_3	1.161352600
C_1	0.006702835
C_2	0.0219416210
C_3	80.74077010

Constants of Formula for dn/dT

D_0	2.77E-06
D_1	1.24E-08
D_2	1.22E-11
E_0	5.19E-07
E_1	6.02E-10
λ_{TK} [μm]	0.184

Temperature Coefficients of the Refractive Index

[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	3.5	4.4	5.2	1.2	2.0	2.8
+20/+40	3.5	4.5	5.4	2.0	3.0	3.9
+60/+80	3.9	4.9	5.9	2.7	3.7	4.7

Internal Transmittance τ_i

λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.400	0.100
2325	0.680	0.380
1970	0.940	0.850
1530	0.985	0.963
1060	0.998	0.995
700	0.998	0.995
660	0.998	0.994
620	0.997	0.993
580	0.998	0.994
546	0.998	0.995
500	0.997	0.993
460	0.994	0.986
436	0.992	0.979
420	0.988	0.971
405	0.982	0.956
400	0.980	0.950
390	0.971	0.930
380	0.954	0.890
370	0.930	0.830
365	0.910	0.790
350	0.820	0.610
334	0.660	0.350
320	0.460	0.140
310	0.280	0.030
300	0.220	0.010
290	0.120	0.000
280	0.020	
270	0.000	
260		
250		

Color Code

$\lambda_{80} / \lambda_{5}$ 37/28

Remarks

Relative Partial Dispersion P

$P_{s,t}$	0.2768
$P_{C,s}$	0.5337
$P_{d,C}$	0.3032
$P_{e,d}$	0.2383
$P_{g,F}$	0.5473
$P_{i,h}$	0.7813

Relative Partial Dispersion P'

$P'_{s,t}$	0.2744
$P'_{C,s}$	0.5767
$P'_{d,C'}$	0.2527
$P'_{e,d}$	0.2362
$P'_{g,F'}$	0.4857
$P'_{i,h}$	0.7743

Deviation of Rel. Partial Disp.

ΔP from the normal line	
$\Delta P_{C,t}$	0.0175
$\Delta P_{C,s}$	0.0089
$\Delta P_{F,e}$	-0.0024
$\Delta P_{g,F}$	-0.0085
$\Delta P_{i,g}$	-0.0484

Chemical Properties

CR	1
FR	1
SR	51.3
AR	1
PR	2
SR-J	4
WR-J	1

Other Properties

$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	5.8
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	7.1
T_g [°C]	668
T_{10}^{13} [°C]	670
$T_{10}^{7.6}$ [°C]	750
c_p [J/(g*K)]	0.560
λ [W/(m*K)]	0.890
AT [°C]	702
ρ [g/cm ³]	4.22
E [10^3 N/mm ²]	122
μ	0.295
K [10^{-6} mm ² /N]	1.43
HK _{0.1/20}	797

N-LAK34 729545.402

 $n_d = 1.72916$
 $v_d = 54.50$
 $n_F - n_C = 0.013379$
 $n_e = 1.73235$
 $v_e = 54.27$
 $n_F - n_C = 0.013493$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.68925
$n_{1970.1}$	1970.1	1.69695
$n_{1529.6}$	1529.6	1.70500
$n_{1060.0}$	1060.0	1.71315
n_t	1014.0	1.71407
n_s	852.1	1.71787
n_r	706.5	1.72277
n_C	656.3	1.72509
$n_{C'}$	643.8	1.72574
$n_{632.8}$	632.8	1.72634
n_D	589.3	1.72904
n_d	587.6	1.72916
n_e	546.1	1.73235
n_F	486.1	1.73847
$n_{F'}$	480.0	1.73923
n_g	435.8	1.74575
n_h	404.7	1.75180
n_i	365.0	1.76214
$n_{334.1}$	334.1	1.77331
$n_{312.6}$	312.6	1.78359
$n_{296.7}$	296.7	1.79296
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.266614420
B_2	0.665919318
B_3	1.124961200
C_1	0.005892781
C_2	0.0197509041
C_3	78.88941740

Constants of Formula for dn/dT	
D_0	1.96E-06
D_1	9.65E-09
D_2	4.40E-12
E_0	4.91E-07
E_1	5.28E-10
λ_{TK} [μm]	0.161

Temperature Coefficients of the Refractive Index						
[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	3.1	3.9	4.6	0.8	1.5	2.2
+20/+40	3.0	3.8	4.6	1.5	2.3	3.1
+60/+80	3.1	4.0	4.9	2.0	2.9	3.7

Internal Transmittance τ_i		
λ [nm]	τ_i [10mm]	τ_i [25mm]
2500	0.400	0.100
2325	0.670	0.370
1970	0.940	0.850
1530	0.984	0.960
1060	0.998	0.995
700	0.999	0.997
660	0.999	0.997
620	0.998	0.996
580	0.998	0.995
546	0.999	0.997
500	0.998	0.994
460	0.995	0.987
436	0.992	0.979
420	0.989	0.972
405	0.983	0.959
400	0.981	0.952
390	0.976	0.940
380	0.963	0.910
370	0.940	0.860
365	0.920	0.820
350	0.850	0.670
334	0.710	0.430
320	0.530	0.200
310	0.380	0.070
300	0.280	0.030
290	0.170	0.010
280	0.070	
270	0.010	
260		
250		

Color Code	
λ_{80} / λ_5	37/28

Remarks

Relative Partial Dispersion P	
$P_{s,t}$	0.2841
$P_{C,s}$	0.5398
$P_{d,C}$	0.3042
$P_{e,d}$	0.2384
$P_{g,F}$	0.5443
$P_{i,h}$	0.7726

Relative Partial Dispersion P'	
$P'_{s,t}$	0.2817
$P'_{C,s}$	0.5833
$P'_{d,C'}$	0.2536
$P'_{e,d}$	0.2364
$P'_{g,F'}$	0.4832
$P'_{i,h}$	0.7661

Deviation of Rel. Partial Disp. ΔP from the normal line	
$\Delta P_{C,t}$	0.0204
$\Delta P_{C,s}$	0.0099
$\Delta P_{F,e}$	-0.0024
$\Delta P_{g,F}$	-0.0079
$\Delta P_{i,g}$	-0.0423

Chemical Properties	
CR	1
FR	0
SR	52.3
AR	1
PR	2.3

Other Properties	
$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	5.8
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	6.9
T_g [°C]	668
T_{10}^{13} [°C]	668
$T_{10}^{7.6}$ [°C]	740
c_p [J/(g*K)]	0.520
λ [W/(m*K)]	0.820
ρ [g/cm ³]	4.02
E [10^3 N/mm ²]	117
μ	0.290
K [10^{-6} mm ² /N]	1.52
$HK_{0.1/20}$	740
HG	2

P-LAK35 693532.385

$n_d = 1.69350$

$v_d = 53.20$

$n_F - n_C = 0.013036$

$n_e = 1.69661$

$v_e = 52.95$

$n_F - n_C = 0.013156$

Refractive Indices		
	λ [nm]	
$n_{2325.4}$	2325.4	1.65762
$n_{1970.1}$	1970.1	1.66411
$n_{1529.6}$	1529.6	1.67100
$n_{1060.0}$	1060.0	1.67824
n_t	1014.0	1.67909
n_s	852.1	1.68264
n_r	706.5	1.68732
n_C	656.3	1.68955
$n_{C'}$	643.8	1.69018
$n_{632.8}$	632.8	1.69077
n_D	589.3	1.69338
n_d	587.6	1.69350
n_e	546.1	1.69661
n_F	486.1	1.70259
$n_{F'}$	480.0	1.70334
n_g	435.8	1.70974
n_h	404.7	1.71569
n_i	365.0	1.72590
$n_{334.1}$	334.1	1.73698
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Constants of Dispersion Formula	
B_1	1.393242600
B_2	0.418882766
B_3	1.043807000
C_1	0.007159597
C_2	0.0233637446
C_3	88.32844260

Constants of Formula for dn/dT	
D_0	-1.90E-06
D_1	7.99E-09
D_2	7.76E-12
E_0	5.64E-07
E_1	6.57E-10
λ_{TK} [μm]	0.185

Temperature Coefficients of the Refractive Index						
[°C]	$\Delta n_{rel}/\Delta T$ [$10^{-6}/K$]			$\Delta n_{abs}/\Delta T$ [$10^{-6}/K$]		
	1060.0	e	g	1060.0	e	g
-40/-20	1.1	1.9	2.7	-1.2	-0.4	0.3
+20/+40	0.8	1.7	2.6	-0.7	0.2	1.1
+60/+80	0.9	1.9	2.9	-0.3	0.7	1.7

Internal Transmittance τ_i			
λ [nm]	τ_i [10mm]	τ_i [25mm]	
2500	0.550	0.220	
2325	0.760	0.500	
1970	0.950	0.870	
1530	0.992	0.981	
1060	0.999	0.999	
700	0.997	0.993	
660	0.997	0.992	
620	0.997	0.992	
580	0.997	0.993	
546	0.998	0.994	
500	0.997	0.992	
460	0.994	0.985	
436	0.992	0.980	
420	0.991	0.977	
405	0.989	0.973	
400	0.988	0.970	
390	0.984	0.960	
380	0.976	0.940	
370	0.962	0.910	
365	0.950	0.880	
350	0.890	0.740	
334	0.750	0.480	
320	0.540	0.210	
310	0.350	0.060	
300	0.160	0.010	
290	0.030	0.000	
280	0.000		
270			
260			
250			

Color Code	
λ_{80} / λ_5	36/29

Remarks
suitable for precision molding

Relative Partial Dispersion P	
$P_{s,t}$	0.2723
$P_{C,s}$	0.5304
$P_{d,C}$	0.3028
$P_{e,d}$	0.2383
$P_{g,F}$	0.5482
$P_{i,h}$	0.7832

Relative Partial Dispersion P'	
$P'_{s,t}$	0.2698
$P'_{C,s}$	0.5732
$P'_{d,C'}$	0.2524
$P'_{e,d}$	0.2361
$P'_{g,F'}$	0.4864
$P'_{i,h}$	0.7761

Deviation of Rel. Partial Disp. ΔP from the normal line	
$\Delta P_{C,t}$	0.0053
$\Delta P_{C,s}$	0.0034
$\Delta P_{F,e}$	-0.0015
$\Delta P_{g,F}$	-0.0061
$\Delta P_{i,g}$	-0.0379

Chemical Properties	
CR	2
FR	5
SR	53.3
AR	1.3
PR	4.3
SR-J	4
WR-J	3

Other Properties	
$\alpha_{-30/+70^\circ\text{C}}$ [$10^{-6}/K$]	8.1
$\alpha_{+20/+300^\circ\text{C}}$ [$10^{-6}/K$]	9.7
T_g [°C]	508
T_{10}^{13} [°C]	511
$T_{10}^{7.6}$ [°C]	598
c_p [J/(g·K)]	0.630
λ [W/(m·K)]	0.720
AT [°C]	544
ρ [g/cm ³]	3.85
E [10^3 N/mm ²]	101
μ	0.289
K [10^{-6} mm ² /N]	1.76
HK _{0.1/20}	616
Abrasion Aa	119

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