J-LAK9

n_d = 1.691000 n_e = 1.693998

ν_d = 54.93 ν_e = 54.71

Glass code (d)
691549
Glass code (e)
694547

Spectral l.	Refractive idx
2.058	1.65866
1.970	1.66037
1.530	1.66808
1.129	1.67465
1.064	1.67580
t	1.67675
s	1.68036
A'	1.682783
r	1.684987
C	1.687171
C'	1.687781
He-Ne	1.688350
D	1.690888
d	1.691000
e	1.693998
F	1.699750
F'	1.700467
g	1.706596
h	1.712290
0.389	1.715768
i	1.722021

Partial dispersion	
F-C	0.012579
F'-C'	0.012686
C-t	0.010417
C-A'	0.004388
d-C	0.003829
e-C	0.006827
g-d	0.015596
g-F	0.006846
h-g	0.005694
i-g	0.015425
C'-t	0.011027
e-C'	0.006217
F'-e	0.006469
i-F'	0.021554

Relative partial dispersion	
C-t／F-C	0.8281
C-A'／F-C	0.3488
d-C／F-C	0.3044
e-C／F-C	0.5427
g-d／F-C	1.2398
g-F／F-C	0.5442
h-g／F-C	0.4527
i-g／F-C	1.2263
C'-t／F'-C'	0.8692
e-C'／F'-C'	0.4901
F'-e／F'-C'	0.5099
i-F'／F'-C'	1.6990

Deviation of relative partial disp.	
ΔPdC	0.0024
ΔPgF	−0.0079

Internal CC (80%/5%)
357/303
Color Code (80%/5%)
380/305
CCI
B –
G –
R –

Thermal properties	
CTE(−30,70) [1E-7/℃]	59
CTE(100,300) [1E-7/℃]	75
Tg [℃]	658
At [℃]	686
StP [℃]	–
AP [℃]	–
SP [℃]	–
Ht cndct. [W/m･K]	0.946
Sp. heat [kJ/kg･K]	0.648
Ht diffus. [1E-6 m2/sec]	0.420

Chemical properties [class]	
Acid res. (surface)	5
Alkaline detergent res.	4
Climate resistance	1
Water res. (powder)	2
Acid res. (powder)	4

Mechanical properties	
Knoop hardness	679 (7)
Abrasion hardness	79
Young's mod. [GPa]	113.9
Shear mod. [GPa]	44.2
Poisson's ratio	0.289
Stress optical coef. [1E-5 nm/cm／Pa]	2.01

Internal trans. (10mm)	
λ [nm]	τ
280	–
290	–
300	–
310	0.11
320	0.24
330	0.41
340	0.58
350	0.73
360	0.83
370	0.900
380	0.937
390	0.960
400	0.973
420	0.985
440	0.989
460	0.991
480	0.994
500	0.995
550	0.997
600	0.995
650	0.993
700	0.989
800	0.982
900	0.997
1000	0.998
1200	0.998
1400	0.985
1600	0.984
1800	0.973
2000	0.944
2200	0.84
2400	0.60

Specific gravity
3.48

Coef. disp. form. (pwr ser.)	
A0	2.80700795E+00
A1	−1.35938061E-02
A2	−1.53406686E-04
A3	1.88808096E-02
A4	2.80739188E-04
A5	5.33547368E-06
A6	1.19947182E-07
A7	0.00000000E+00
A8	0.00000000E+00

Relative Δn/ΔT [1E-6/℃]															
Temp. [℃]	1.083	t	s	A'	r	C	C'	He-Ne	d	e	F	F'	g	h	0.389
80 to 90 (ref.)	3.2	3.3	3.4	3.5	3.6	3.8	3.8	3.8	4.0	4.2	4.6	4.6	5.1	5.5	5.8
60 to 80 (ref.)	3.1	3.1	3.3	3.4	3.5	3.6	3.7	3.7	3.9	4.0	4.4	4.5	4.9	5.3	5.6
40 to 60	3.0	3.0	3.1	3.2	3.4	3.5	3.5	3.5	3.7	3.9	4.2	4.3	4.7	5.1	5.4
20 to 40	2.9	2.9	3.0	3.1	3.2	3.4	3.4	3.4	3.6	3.7	4.1	4.1	4.5	4.9	5.2
0 to 20	2.8	2.8	3.0	3.1	3.2	3.3	3.3	3.3	3.5	3.6	4.0	4.0	4.4	4.8	5.0
−20 to 0	2.8	2.8	2.9	3.0	3.1	3.2	3.3	3.3	3.4	3.6	3.9	3.9	4.3	4.7	4.9
−40 to −20	2.8	2.9	3.0	3.1	3.2	3.3	3.3	3.3	3.4	3.6	3.9	3.9	4.3	4.6	4.8
−60 to −40 (ref.)	3.0	3.0	3.1	3.2	3.3	3.4	3.4	3.4	3.6	3.7	4.0	4.0	4.4	4.7	4.9
−70 to −60 (ref.)	3.2	3.2	3.3	3.4	3.5	3.6	3.6	3.6	3.7	3.9	4.2	4.2	4.5	4.8	5.0

Absolute Δn/ΔT [1E-6/℃]															
Temp. [℃]	1.083	t	s	A'	r	C	C'	He-Ne	d	e	F	F'	g	h	0.389
80 to 90	2.2	2.2	2.4	2.5	2.6	2.7	2.7	2.8	2.9	3.1	3.5	3.6	4.0	4.4	4.7
60 to 80	2.0	2.0	2.1	2.3	2.4	2.5	2.5	2.5	2.7	2.9	3.3	3.3	3.7	4.2	4.4
40 to 60	1.7	1.7	1.9	2.0	2.1	2.2	2.2	2.2	2.4	2.6	2.9	3.0	3.4	3.8	4.0
20 to 40	1.4	1.5	1.6	1.7	1.8	1.9	1.9	1.9	2.1	2.3	2.6	2.6	3.0	3.4	3.6
0 to 20	1.1	1.2	1.3	1.4	1.5	1.6	1.6	1.6	1.8	1.9	2.3	2.3	2.7	3.0	3.2
−20 to 0	0.9	0.9	1.0	1.1	1.2	1.3	1.3	1.3	1.5	1.6	1.9	2.0	2.3	2.6	2.8
−40 to −20	0.6	0.6	0.7	0.8	0.9	1.0	1.0	1.0	1.1	1.3	1.6	1.6	1.9	2.2	2.4
−60 to −40	0.3	0.3	0.4	0.5	0.6	0.7	0.7	0.7	0.8	1.0	1.2	1.3	1.6	1.9	2.1
−70 to −60	0.1	0.1	0.2	0.3	0.4	0.5	0.5	0.5	0.6	0.7	1.0	1.0	1.3	1.6	1.8

Coef. disp. form. (frac. eq.)(ref.)	
P1	1.34618096E-01
Q1	7.60858750E+01
P2	8.04951206E-02
Q2	1.70486934E-02
P3	2.95434912E-01
Q3	3.64440992E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.6	2.7
Frac. eq. (ref.)	0.6	2.9

Prod. Freq. (A to D)	D

Similar glass type			
OHARA	S-LAL9	HOYA	LAC9
CDGM	H-LaK59A	SCHOTT	N-LAK9

2019-4-1	Transmittance
2018-4-1	Prod. Freq.
2016-4-1	Similar glass type

HIKARI GLASS CO., LTD.