

J-LAK18

 $n_d = 1.729160$
 $n_e = 1.732343$
 $v_d = 54.61$
 $v_e = 54.39$

Glass code (d)
729546
Glass code (e)
732544

Spectral l.	Refractive idx
2.058	1.69519
1.970	1.69698
1.530	1.70502
1.129	1.71188
1.064	1.71309
t	1.71409
s	1.71789
A'	1.720449
r	1.722782
C	1.725097
C'	1.725745
He-Ne	1.726348
D	1.729041
d	1.729160
e	1.732343
F	1.738449
F'	1.739210
g	1.745716
h	1.751757
0.389	1.755445
i	1.762072

Coef. disp. form. (pwr ser.)	
A0	2.93263885E+00
A1	-1.42564324E-02
A2	-1.92506617E-04
A3	2.06017616E-02
A4	2.93008969E-04
A5	6.61918495E-06
A6	7.33494598E-08
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.013352
F'-C'	0.013465
C-t	0.011009
C-A'	0.004648
d-C	0.004063
e-C	0.007246
g-d	0.016556
g-F	0.007267
h-g	0.006041
i-g	0.016356
C'-t	0.011657
e-C'	0.006598
F'-e	0.006867
i-F'	0.022862

Relative partial dispersion	
C-t/F-C	0.8245
C-A'/F-C	0.3481
d-C/F-C	0.3043
e-C/F-C	0.5427
g-d/F-C	1.2400
g-F/F-C	0.5443
h-g/F-C	0.4524
i-g/F-C	1.2250
C'-t/F'-C'	0.8657
e-C'/F'-C'	0.4900
F'-e/F'-C'	0.5100
i-F'/F'-C'	1.6979

Deviation of relative partial disp.	
ΔPdC	0.0024
ΔPgF	-0.0085

Internal CC (80%/5%)	
343/278	
Color Code (80%/5%)	
365/280	
CCI	
B	0.00
G	0.34
R	0.35

Thermal properties	
CTE(-30,70) [1E-7/°C]	56
CTE(100,300) [1E-7/°C]	70
Tg [°C]	668
At [°C]	694
StP [°C]	619
AP [°C]	647
SP [°C]	742
Ht condct. [W/m·K]	0.876
Sp. heat [kJ/kg·K]	0.525
Ht diffus. [1E-6 m2/sec]	0.400

Chemical properties [class]	
Acid res. (surface)	5
Alkaline detergent res.	3
Climate resistance	1
Water res. (powder)	1
Acid res. (powder)	4

Mechanical properties	
Knoop hardness	738 (7)
Abrasion hardness	68
Young's mod. [GPa]	118.7
Shear mod. [GPa]	46.0
Poisson's ratio	0.292
Stress optical coef. [1E-5 nm/cm/Pa]	1.68

Internal trans. (10mm)	
λ [nm]	τ
280	0.06
290	0.15
300	0.25
310	0.34
320	0.52
330	0.67
340	0.77
350	0.85
360	0.908
370	0.943
380	0.964
390	0.976
400	0.983
420	0.990
440	0.993
460	0.995
480	0.997
500	0.998
550	0.999
600	0.999
650	0.999
700	0.999
800	0.997
900	0.996
1000	0.996
1200	0.996
1400	0.992
1600	0.988
1800	0.979
2000	0.953
2200	0.87
2400	0.60

Specific gravity
4.17

Relative $\Delta n / \Delta T$ [1E-6/°C]																
Temp. [°C]	1.083	t	s	A'	r	C	C'	He-Ne	d	e	F	F'	g	h	0.389	
80 to 90 (ref.)	3.5	3.6	3.7	3.9	4.0	4.1	4.2	4.2	4.4	4.6	4.9	5.0	5.4	5.8	6.1	
60 to 80 (ref.)	3.4	3.5	3.7	3.8	3.9	4.0	4.0	4.1	4.2	4.4	4.8	4.8	5.3	5.7	6.0	
40 to 60	3.3	3.3	3.5	3.6	3.7	3.9	3.9	3.9	4.1	4.3	4.6	4.7	5.1	5.5	5.8	
20 to 40	3.2	3.2	3.4	3.5	3.6	3.8	3.8	3.8	4.0	4.2	4.5	4.6	5.0	5.4	5.6	
0 to 20	3.1	3.2	3.3	3.5	3.6	3.7	3.7	3.8	3.9	4.1	4.4	4.5	4.9	5.3	5.5	
-20 to 0	3.1	3.2	3.3	3.5	3.6	3.7	3.7	3.8	3.9	4.1	4.4	4.5	4.8	5.2	5.5	
-40 to -20	3.2	3.2	3.4	3.5	3.6	3.7	3.8	3.8	3.9	4.1	4.4	4.5	4.9	5.2	5.5	
-60 to -40 (ref.)	3.4	3.4	3.6	3.7	3.8	3.9	3.9	4.0	4.1	4.3	4.6	4.6	5.0	5.4	5.6	
-70 to -60 (ref.)	3.6	3.6	3.8	3.9	4.0	4.1	4.1	4.2	4.3	4.5	4.8	4.8	5.2	5.6	5.8	

Absolute $\Delta n / \Delta T$ [1E-6/°C]																
Temp. [°C]	1.083	t	s	A'	r	C	C'	He-Ne	d	e	F	F'	g	h	0.389	
80 to 90	2.5	2.5	2.7	2.8	2.9	3.1	3.1	3.1	3.3	3.5	3.8	3.9	4.3	4.7	5.0	
60 to 80	2.3	2.3	2.5	2.6	2.7	2.8	2.9	2.9	3.1	3.2	3.6	3.7	4.1	4.5	4.7	
40 to 60	2.0	2.0	2.2	2.3	2.4	2.6	2.6	2.6	2.8	2.9	3.3	3.3	3.7	4.1	4.4	
20 to 40	1.7	1.8	1.9	2.0	2.2	2.3	2.3	2.3	2.5	2.6	3.0	3.0	3.4	3.8	4.1	
0 to 20	1.4	1.5	1.6	1.8	1.9	2.0	2.0	2.0	2.2	2.4	2.7	2.7	3.1	3.5	3.7	
-20 to 0	1.2	1.2	1.4	1.5	1.6	1.7	1.7	1.8	1.9	2.1	2.4	2.4	2.8	3.2	3.4	
-40 to -20	0.9	0.9	1.1	1.2	1.3	1.4	1.4	1.5	1.6	1.8	2.1	2.1	2.5	2.8	3.1	
-60 to -40	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.2	1.3	1.5	1.8	1.8	2.1	2.5	2.7	
-70 to -60	0.4	0.5	0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.2	1.5	1.6	1.9	2.2	2.5	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.18293410E-01
Q1	6.70082181E+01
P2	7.73335459E-02
Q2	1.69418126E-02
P3	3.14497232E-01
Q3	3.89398254E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.6	6.6
Frac. eq. (ref.)	0.7	7.0

Prod. Freq. (A to D)	B
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Similar glass type			
OHARA	S-LAL18	HOYA	TAC8
CDGM	H-LaK52	SCHOTT	N-LAK34

2022-7-1	StP, AP, SP
2019-4-1	Transmittance
2016-4-1	Prod. Freq