

J-LAK7

$n_d = 1.651600$

$n_e = 1.654253$

$v_d = 58.57$

$v_e = 58.34$

Glass code (d)	652586
Glass code (e)	654583

Spectral l.	Refractive idx
2.058	1.62263
1.970	1.62418
1.530	1.63114
1.129	1.63704
1.064	1.63808
t	1.63893
s	1.64215
A'	1.644307
r	1.646266
C	1.648206
C'	1.648747
He-Ne	1.649252
D	1.651501
d	1.651600
e	1.654253
F	1.659331
F'	1.659962
g	1.665356
h	1.670353
0.389	1.673398
i	1.678861

Coef. disp. form. (pwr ser.)	
A0	2.68232720E+00
A1	-1.19713031E-02
A2	-1.43724360E-04
A3	1.64555463E-02
A4	2.17295781E-04
A5	4.69383509E-06
A6	3.49394854E-08
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.011125
F'-C'	0.011215
C-t	0.009279
C-A'	0.003899
d-C	0.003394
e-C	0.006047
g-d	0.013756
g-F	0.006025
h-g	0.004997
i-g	0.013505
C'-t	0.009820
e-C'	0.005506
F'-e	0.005709
i-F'	0.018899

Relative partial dispersion	
C-t/F-C	0.8341
C-A'/F-C	0.3505
d-C/F-C	0.3051
e-C/F-C	0.5436
g-d/F-C	1.2365
g-F/F-C	0.5416
h-g/F-C	0.4492
i-g/F-C	1.2139
C'-t/F'-C'	0.8756
e-C'/F'-C'	0.4909
F'-e/F'-C'	0.5091
i-F'/F'-C'	1.6852

Deviation of relative partial disp.	
ΔPdC	0.0014
ΔPgF	-0.0045

Specific gravity	3.30
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Thermal properties	
CTE(-30,70) [1E-7/°C]	66
CTE(100,300) [1E-7/°C]	82
Tg [°C]	651
At [°C]	681
Ht condct. [W/m·K]	0.953
Sp. heat [kJ/kg·K]	0.670
Ht diffus. [1E-6 m2/sec]	0.431

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

Mechanical properties	
Knoop hardness	583 (6)
Abrasion hardness	106
Young's mod. [GPa]	100.3
Shear mod. [GPa]	39.0
Poisson's ratio	0.285
Stress optical coef. [1E-5 nm/cm/Pa]	2.02

Color Code (80%/5%)	350/280
Internal CC	333/280
Internal trans. (10mm)	
λ [nm]	τ
280	0.07
290	0.20
300	0.36
310	0.52
320	0.66
330	0.77
340	0.86
350	0.911
360	0.945
365	0.958
370	0.968
380	0.979
390	0.985
400	0.989
420	0.992
440	0.992
460	0.994
480	0.995
500	0.996
550	0.996
600	0.996
650	0.994
700	0.993
800	0.989
900	0.997
1000	0.994
1200	0.996
1400	0.993
1600	0.990
1800	0.981
2000	0.963
2200	0.900
2400	0.70

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.)	2.0	2.1	2.1	2.3	2.4	2.5	2.6	2.6	2.7	2.9	3.2	3.3	3.7	4.0	4.3	
60 to 80 (ref.)	1.9	2.0	2.1	2.2	2.3	2.4	2.4	2.5	2.6	2.8	3.1	3.2	3.5	3.9	4.1	
40 to 60	1.8	1.8	2.0	2.1	2.2	2.3	2.3	2.3	2.5	2.6	3.0	3.0	3.3	3.7	3.9	
20 to 40	1.7	1.8	1.9	2.0	2.1	2.2	2.2	2.2	2.4	2.5	2.8	2.9	3.2	3.5	3.7	
0 to 20	1.7	1.7	1.8	1.9	2.0	2.1	2.1	2.2	2.3	2.4	2.7	2.8	3.1	3.4	3.6	
-20 to 0	1.7	1.7	1.8	1.9	2.0	2.1	2.1	2.1	2.3	2.4	2.7	2.7	3.0	3.3	3.5	
-40 to -20	1.7	1.8	1.9	1.9	2.0	2.1	2.2	2.2	2.3	2.4	2.7	2.7	3.0	3.3	3.5	
-60 to -40 (ref.)	1.9	1.9	2.0	2.1	2.2	2.3	2.3	2.3	2.4	2.6	2.8	2.9	3.1	3.4	3.6	
-70 to -60 (ref.)	2.1	2.1	2.2	2.3	2.4	2.5	2.5	2.5	2.6	2.8	3.0	3.0	3.3	3.6	3.7	

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	1.0	1.1	1.2	1.3	1.4	1.5	1.5	1.6	1.7	1.9	2.2	2.2	2.6	3.0	3.2	
60 to 80	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.3	1.5	1.7	2.0	2.0	2.4	2.7	2.9	
40 to 60	0.6	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.4	1.7	1.7	2.0	2.4	2.6	
20 to 40	0.3	0.3	0.4	0.5	0.6	0.7	0.8	0.8	0.9	1.1	1.4	1.4	1.7	2.0	2.2	
0 to 20	0.1	0.1	0.2	0.3	0.4	0.5	0.5	0.5	0.6	0.8	1.1	1.1	1.4	1.7	1.9	
-20 to 0	-0.2	-0.2	-0.1	0.0	0.1	0.2	0.2	0.2	0.3	0.5	0.7	0.8	1.1	1.3	1.5	
-40 to -20	-0.5	-0.4	-0.4	-0.3	-0.2	-0.1	-0.1	-0.1	0.1	0.2	0.4	0.5	0.7	1.0	1.2	
-60 to -40	-0.7	-0.7	-0.6	-0.5	-0.5	-0.4	-0.4	-0.3	-0.2	-0.1	0.1	0.2	0.4	0.7	0.8	
-70 to -60	-0.9	-0.9	-0.8	-0.7	-0.7	-0.6	-0.6	-0.5	-0.4	-0.3	-0.1	-0.1	0.2	0.4	0.6	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.23367890E-01
Q1	7.50281422E+01
P2	7.86744637E-02
Q2	1.56987933E-02
P3	2.80638114E-01
Q3	3.60652473E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.4	2.9
Frac. eq. (ref.)	0.4	3.1

Prod. Freq. (A to D)	C
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Similar glass type			
OHARA	S-LAL7	HOYA	LAC7
CDGM	H-LaK50A	SCHOTT	N-LAK7

2018-4-1	Prod. Freq.
2015-4-1	Color Code, Prod. Freq
2009-9-1	1st edition