

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

Internal CC (80%/5%)	
333/262	
Color Code (80%/5%)	
350/265	
CCI	
B	0.00
G	0.24
R	0.22

Thermal properties	
CTE(-30,70) [1E-7/°C]	66
CTE(100,300) [1E-7/°C]	82
Tg [°C]	651
At [°C]	681
StP [°C]	606
AP [°C]	634
SP [°C]	736
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	2
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

Internal trans. (10mm)	
λ [nm]	τ
280	0.17
290	0.28
300	0.40
310	0.53
320	0.66
330	0.77
340	0.85
350	0.907
360	0.944
370	0.966
380	0.978
390	0.985
400	0.989
420	0.992
440	0.994
460	0.995
480	0.997
500	0.998
550	0.998
600	0.998
650	0.998
700	0.998
800	0.998
900	0.997
1000	0.997
1200	0.996
1400	0.993
1600	0.990
1800	0.981
2000	0.963
2200	0.900
2400	0.70

Specific gravity
3.3

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

2022-7-1	StP, AP, SP
2020-4-1	chemical properties
2019-4-1	Transmittance