

J-LAK7R

$n_d = 1.651600$

$n_e = 1.654251$

$v_d = 58.62$

$v_e = 58.39$

Glass code (d)
652586
Glass code (e)
654584

Spectral l.	Refractive idx
2.058	1.62217
1.970	1.62376
1.530	1.63092
1.129	1.63696
1.064	1.63802
t	1.63888
s	1.64213
A'	1.644299
r	1.646264
C	1.648206
C'	1.648747
He-Ne	1.649252
D	1.651501
d	1.651600
e	1.654251
F	1.659322
F'	1.659952
g	1.665335
h	1.670319
0.389	1.673357
i	1.678803

Coef. disp. form. (pwr ser.)	
A0	2.68281356E+00
A1	-1.24621940E-02
A2	-1.36478256E-04
A3	1.62751692E-02
A4	2.53121787E-04
A5	1.72812439E-07
A6	2.34124836E-07
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.011116
F'-C'	0.011205
C-t	0.009327
C-A'	0.003907
d-C	0.003394
e-C	0.006045
g-d	0.013735
g-F	0.006013
h-g	0.004984
i-g	0.013468
C'-t	0.009868
e-C'	0.005504
F'-e	0.005701
i-F'	0.018851

Relative partial dispersion	
C-t/F-C	0.8391
C-A'/F-C	0.3515
d-C/F-C	0.3053
e-C/F-C	0.5438
g-d/F-C	1.2356
g-F/F-C	0.5409
h-g/F-C	0.4484
i-g/F-C	1.2116
C'-t/F'-C'	0.8807
e-C'/F'-C'	0.4912
F'-e/F'-C'	0.5088
i-F'/F'-C'	1.6824

Deviation of relative partial disp.	
ΔPdC	0.0017
ΔPgF	-0.0051

Internal CC (80%/5%)	
330/270	
Color Code (80%/5%)	
350/270	
CCI	
B	0.00
G	0.18
R	0.18

Thermal properties	
CTE(-30,70) [1E-7/°C]	61
CTE(100,300) [1E-7/°C]	78
Tg [°C]	650
At [°C]	677
StP [°C]	607
AP [°C]	637
SP [°C]	741
Ht condct. [W/m·K]	0.805
Sp. heat [kJ/kg·K]	0.642
Ht diffus. [1E-6 m2/sec]	0.375

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

Mechanical properties	
Knoop hardness	568 (6)
Abrasion hardness	87
Young's mod. [GPa]	101.7
Shear mod. [GPa]	39.6
Poisson's ratio	0.283
Stress optical coef. [1E-5 nm/cm/Pa]	2.11

Internal trans. (10mm)		
λ [nm]	τ	
280	0.13	
290	0.27	
300	0.42	
310	0.55	
320	0.69	
330	0.80	
340	0.87	
350	0.920	
360	0.953	
370	0.970	
380	0.981	
390	0.987	
400	0.990	
420	0.993	
440	0.994	
460	0.996	
480	0.996	
500	0.997	
550	0.998	
600	0.998	
650	0.998	
700	0.999	
800	0.997	
900	0.995	
1000	0.996	
1200	0.997	
1400	0.993	
1600	0.989	
1800	0.979	
2000	0.961	
2200	0.88	
2400	0.67	

Specific gravity	
3.34	

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.)	2.8	2.9	3.0	3.1	3.2	3.3	3.3	3.4	3.5	3.7	4.0	4.1	4.5	4.8	5.1	
60 to 80 (ref.)	2.7	2.8	2.9	3.0	3.1	3.2	3.2	3.2	3.4	3.5	3.9	3.9	4.3	4.7	4.9	
40 to 60	2.6	2.6	2.8	2.9	2.9	3.0	3.1	3.1	3.2	3.4	3.7	3.8	4.1	4.5	4.7	
20 to 40	2.5	2.5	2.7	2.7	2.8	2.9	3.0	3.0	3.1	3.3	3.6	3.6	4.0	4.3	4.5	
0 to 20	2.4	2.5	2.6	2.7	2.8	2.9	2.9	2.9	3.0	3.2	3.5	3.5	3.8	4.2	4.4	
-20 to 0	2.4	2.5	2.6	2.7	2.7	2.8	2.9	2.9	3.0	3.1	3.4	3.5	3.8	4.1	4.3	
-40 to -20	2.5	2.5	2.6	2.7	2.8	2.9	2.9	2.9	3.0	3.2	3.4	3.5	3.8	4.1	4.3	
-60 to -40 (ref.)	2.6	2.7	2.8	2.9	2.9	3.0	3.0	3.1	3.2	3.3	3.6	3.6	3.9	4.2	4.3	
-70 to -60 (ref.)	2.8	2.9	3.0	3.0	3.1	3.2	3.2	3.2	3.3	3.5	3.7	3.8	4.0	4.3	4.5	

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	1.8	1.9	2.0	2.1	2.2	2.3	2.3	2.3	2.5	2.6	3.0	3.0	3.4	3.8	4.0	
60 to 80	1.6	1.7	1.8	1.9	2.0	2.1	2.1	2.1	2.3	2.4	2.7	2.8	3.1	3.5	3.7	
40 to 60	1.4	1.4	1.5	1.6	1.7	1.8	1.8	1.8	2.0	2.1	2.4	2.5	2.8	3.2	3.4	
20 to 40	1.1	1.1	1.2	1.3	1.4	1.5	1.5	1.5	1.7	1.8	2.1	2.1	2.5	2.8	3.0	
0 to 20	0.8	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.4	1.5	1.8	1.8	2.1	2.5	2.6	
-20 to 0	0.6	0.6	0.7	0.8	0.8	0.9	0.9	1.0	1.1	1.2	1.5	1.5	1.8	2.1	2.3	
-40 to -20	0.3	0.3	0.4	0.5	0.6	0.6	0.7	0.7	0.8	0.9	1.2	1.2	1.5	1.8	1.9	
-60 to -40	0.0	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.5	0.6	0.8	0.9	1.1	1.4	1.6	
-70 to -60	-0.2	-0.1	-0.1	0.0	0.1	0.1	0.2	0.2	0.3	0.4	0.6	0.6	0.9	1.1	1.3	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.26542642E-01
Q1	7.44164113E+01
P2	1.60959593E-01
Q2	1.20300900E-02
P3	1.98399854E-01
Q3	1.51065344E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.5	3.4
Frac. eq. (ref.)	0.5	4.0

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
2019-4-1	Transmittance
2018-4-1	Prod. Freq.