

J-LAK14

$n_d = 1.696800$

$n_e = 1.699792$

$v_d = 55.52$

$v_e = 55.30$

Glass code (d)
697555
Glass code (e)
700553

Spectral l.	Refractive idx
2.058	1.66396
1.970	1.66573
1.530	1.67367
1.129	1.68037
1.064	1.68155
t	1.68251
s	1.68615
A'	1.688581
r	1.690789
C	1.692974
C'	1.693585
He-Ne	1.694153
D	1.696688
d	1.696800
e	1.699792
F	1.705525
F'	1.706239
g	1.712340
h	1.718001
0.389	1.721457
i	1.727665

Coef. disp. form. (pwr ser.)	
A0	2.82679870E+00
A1	-1.40346783E-02
A2	-1.70936348E-04
A3	1.89011366E-02
A4	2.75933670E-04
A5	5.15919094E-06
A6	9.87059817E-08
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.012551
F'-C'	0.012654
C-t	0.010465
C-A'	0.004393
d-C	0.003826
e-C	0.006818
g-d	0.015540
g-F	0.006815
h-g	0.005661
i-g	0.015325
C'-t	0.011076
e-C'	0.006207
F'-e	0.006447
i-F'	0.021426

Relative partial dispersion	
C-t/F-C	0.8338
C-A'/F-C	0.3500
d-C/F-C	0.3048
e-C/F-C	0.5432
g-d/F-C	1.2381
g-F/F-C	0.5430
h-g/F-C	0.4510
i-g/F-C	1.2210
C'-t/F'-C'	0.8753
e-C'/F'-C'	0.4905
F'-e/F'-C'	0.5095
i-F'/F'-C'	1.6932

Deviation of relative partial disp.	
ΔPdC	0.0026
ΔPgF	-0.0082

Internal CC (80%/5%)	
349/281	

Color Code (80%/5%)	
370/285	

CCI	
B	0.00
G	0.46
R	0.46

Thermal properties	
CTE(-30,70) [1E-7/°C]	56
CTE(100,300) [1E-7/°C]	70
Tg [°C]	662
At [°C]	686
Ht condct. [W/m·K]	0.971
Sp. heat [kJ/kg·K]	0.610
Ht diffus. [1E-6 m2/sec]	0.437

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	644 (6)
Abrasion hardness	114
Young's mod. [GPa]	109.0
Shear mod. [GPa]	42.3
Poisson's ratio	0.289
Stress optical coef. [1E-5 nm/cm/Pa]	1.90

Internal trans. (10mm)	
λ [nm]	τ
280	0.05
290	0.10
300	0.17
310	0.28
320	0.42
330	0.57
340	0.70
350	0.81
360	0.88
370	0.927
380	0.954
390	0.969
400	0.978
420	0.987
440	0.991
460	0.994
480	0.996
500	0.997
550	0.999
600	0.998
650	0.999
700	0.998
800	0.997
900	0.995
1000	0.996
1200	0.998
1400	0.997
1600	0.992
1800	0.980
2000	0.958
2200	0.88
2400	0.61

Specific gravity	
3.63	

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.)	3.1	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	5.6	
60 to 80 (ref.)	3.0	3.1	3.2	3.3	3.5	3.6	3.6	3.6	3.8	4.0	4.3	4.4	4.8	5.2	5.4	
40 to 60	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.5	3.6	3.8	4.2	4.2	4.6	5.0	5.2	
20 to 40	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.4	3.5	3.7	4.0	4.1	4.4	4.8	5.1	
0 to 20	2.8	2.8	3.0	3.1	3.2	3.3	3.3	3.3	3.5	3.6	3.9	4.0	4.3	4.7	5.0	
-20 to 0	2.8	2.8	3.0	3.1	3.2	3.3	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	3.4	3.5	3.6	3.9	4.0	4.3	4.7	4.9	
-60 to -40 (ref.)	3.0	3.0	3.2	3.3	3.4	3.5	3.5	3.5	3.6	3.8	4.1	4.1	4.5	4.8	5.0	
-70 to -60 (ref.)	3.2	3.2	3.4	3.5	3.6	3.7	3.7	3.7	3.8	4.0	4.3	4.3	4.6	5.0	5.2	

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	2.1	2.1	2.3	2.4	2.5	2.6	2.7	2.7	2.8	3.0	3.4	3.4	3.8	4.2	4.5	
60 to 80	1.9	1.9	2.1	2.2	2.3	2.4	2.5	2.5	2.6	2.8	3.1	3.2	3.6	4.0	4.2	
40 to 60	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.2	2.3	2.5	2.8	2.9	3.3	3.6	3.9	
20 to 40	1.4	1.4	1.6	1.7	1.8	1.9	1.9	1.9	2.1	2.2	2.5	2.6	2.9	3.3	3.5	
0 to 20	1.1	1.1	1.3	1.4	1.5	1.6	1.6	1.6	1.8	1.9	2.2	2.3	2.6	3.0	3.2	
-20 to 0	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.4	1.5	1.6	1.9	2.0	2.3	2.6	2.9	
-40 to -20	0.6	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.6	1.6	2.0	2.3	2.5	
-60 to -40	0.3	0.4	0.5	0.6	0.7	0.7	0.8	0.8	0.9	1.0	1.3	1.3	1.7	2.0	2.2	
-70 to -60	0.1	0.2	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.8	1.1	1.1	1.4	1.7	1.9	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.29541724E-01
Q1	7.14831691E+01
P2	9.73740252E-02
Q2	1.55700037E-02
P3	2.81115754E-01
Q3	3.25551411E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.7	4.0
Frac. eq. (ref.)	0.7	4.1

Prod. Freq. (A to D)	A
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Similar glass type			
OHARA	S-LAL14	HOYA	LAC14
CDGM	H-LAK51A	SCHOTT	N-LAK14

2019-4-1	Transmittance
2015-4-1	Color Code, Prod. Freq., Similar glass type
2009-9-1	1st edition