

# J-LAK04

$n_d = 1.651000$

$n_e = 1.653760$

$v_d = 56.24$

$v_e = 55.98$

Glass code (d)	651562
Glass code (e)	654560

Spectral l.	Refractive idx
2.058	1.62280
1.970	1.62421
1.530	1.63062
1.129	1.63623
1.064	1.63724
t	1.63808
s	1.64129
A'	1.643482
r	1.645487
C	1.647485
C'	1.648044
He-Ne	1.648566
D	1.650897
d	1.651000
e	1.653760
F	1.659061
F'	1.659722
g	1.665373
h	1.670621
0.389	1.673825
i	1.679580

Coef. disp. form. (pwr ser.)	
A0	2.67775568E+00
A1	-1.09363526E-02
A2	-1.12368235E-04
A3	1.71233781E-02
A4	2.57310134E-04
A5	2.54752519E-06
A6	1.89782794E-07
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.011576
F'-C'	0.011678
C-t	0.009409
C-A'	0.004003
d-C	0.003515
e-C	0.006275
g-d	0.014373
g-F	0.006312
h-g	0.005248
i-g	0.014207
C'-t	0.009968
e-C'	0.005716
F'-e	0.005962
i-F'	0.019858

Relative partial dispersion	
C-t/F-C	0.8128
C-A'/F-C	0.3458
d-C/F-C	0.3036
e-C/F-C	0.5421
g-d/F-C	1.2416
g-F/F-C	0.5453
h-g/F-C	0.4534
i-g/F-C	1.2273
C'-t/F'-C'	0.8536
e-C'/F'-C'	0.4895
F'-e/F'-C'	0.5105
i-F'/F'-C'	1.7005

Deviation of relative partial disp.	
$\Delta PdC$	0.0011
$\Delta PgF$	-0.0047

Internal CC (80%/5%)	
346/296	

Color Code (80%/5%)	
360/300	

CCI	
B	-
G	-
R	-

Thermal properties	
CTE(-30,70) [1E-7/°C]	66
CTE(100,300) [1E-7/°C]	83
Tg [°C]	647
At [°C]	687
Ht condct. [W/m·K]	0.979
Sp. heat [kJ/kg·K]	0.636
Ht diffus. [1E-6 m2/sec]	0.471

Chemical properties [class]	
Acid res. (surface)	6
Alkaline detergent res.	4
Climate resistance	2
Water res. (powder)	2
Acid res. (powder)	4

Mechanical properties	
Knoop hardness	612 (6)
Abrasion hardness	96
Young's mod. [GPa]	100.2
Shear mod. [GPa]	39.0
Poisson's ratio	0.284
Stress optical coef. [1E-5 nm/cm/Pa]	2.04

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	0.00
290	0.02
300	0.08
310	0.19
320	0.37
330	0.57
340	0.73
350	0.84
360	0.914
370	0.953
380	0.974
390	0.984
400	0.990
420	0.995
440	0.996
460	0.996
480	0.997
500	0.998
550	0.999
600	0.999
650	0.998
700	0.997
800	0.993
900	0.998
1000	0.997
1200	0.999
1400	0.997
1600	0.992
1800	0.978
2000	0.964
2200	0.900
2400	0.79

Specific gravity	
3.27	

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.)	3.2	3.2	3.3	3.5	3.6	3.7	3.8	3.8	4.0	4.2	4.6	4.6	5.1	5.6	5.8
60 to 80 (ref.)	3.1	3.1	3.3	3.4	3.5	3.6	3.7	3.7	3.9	4.1	4.5	4.5	5.0	5.4	5.7
40 to 60	3.0	3.0	3.2	3.3	3.4	3.5	3.6	3.6	3.7	3.9	4.3	4.4	4.8	5.2	5.5
20 to 40	2.9	2.9	3.1	3.2	3.3	3.4	3.5	3.5	3.7	3.8	4.2	4.2	4.7	5.1	5.3
0 to 20	2.9	2.9	3.0	3.2	3.3	3.4	3.4	3.4	3.6	3.8	4.1	4.2	4.5	4.9	5.2
-20 to 0	2.9	2.9	3.1	3.2	3.3	3.4	3.4	3.4	3.6	3.7	4.1	4.1	4.5	4.9	5.1
-40 to -20	3.0	3.0	3.1	3.2	3.3	3.5	3.5	3.5	3.6	3.8	4.1	4.2	4.5	4.9	5.1
-60 to -40 (ref.)	3.2	3.2	3.3	3.4	3.5	3.6	3.6	3.7	3.8	3.9	4.2	4.3	4.6	5.0	5.2
-70 to -60 (ref.)	3.4	3.4	3.5	3.6	3.7	3.8	3.8	3.9	4.0	4.1	4.4	4.5	4.8	5.1	5.3

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	2.2	2.2	2.3	2.5	2.6	2.7	2.8	2.8	3.0	3.1	3.5	3.6	4.1	4.5	4.8
60 to 80	2.0	2.0	2.2	2.3	2.4	2.5	2.6	2.6	2.8	2.9	3.3	3.4	3.8	4.2	4.5
40 to 60	1.7	1.8	1.9	2.0	2.1	2.3	2.3	2.3	2.5	2.7	3.0	3.1	3.5	3.9	4.2
20 to 40	1.5	1.5	1.7	1.8	1.9	2.0	2.0	2.1	2.2	2.4	2.7	2.8	3.2	3.6	3.8
0 to 20	1.3	1.3	1.4	1.5	1.6	1.7	1.8	1.8	1.9	2.1	2.4	2.5	2.9	3.2	3.5
-20 to 0	1.0	1.1	1.2	1.3	1.4	1.5	1.5	1.5	1.7	1.8	2.1	2.2	2.5	2.9	3.1
-40 to -20	0.8	0.8	0.9	1.0	1.1	1.2	1.2	1.3	1.4	1.5	1.8	1.9	2.2	2.6	2.7
-60 to -40	0.6	0.6	0.7	0.8	0.9	1.0	1.0	1.0	1.1	1.3	1.5	1.6	1.9	2.2	2.4
-70 to -60	0.4	0.4	0.5	0.6	0.7	0.8	0.8	0.8	0.9	1.1	1.3	1.4	1.7	2.0	2.1

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.21788068E-01
Q1	8.13149626E+01
P2	7.22172241E-02
Q2	1.69321714E-02
P3	2.86455337E-01
Q3	3.94241726E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.4	4.0
Frac. eq. (ref.)	0.4	4.0

Prod. Freq. (A to D)	C
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Similar glass type			
OHARA	S-LAL54	HOYA	-
CDGM	H-LaK10	SCHOTT	N-LAK22

2019-4-1	Transmittance
2018-4-1	Prod. Freq.
2015-4-1	Color Code