

# J-LAK8

$n_d = 1.713000$

$n_e = 1.716150$

$v_d = 53.96$

$v_e = 53.73$

Glass code (d)	713540
Glass code (e)	716537

Spectral l.	Refractive idx
2.058	1.67966
1.970	1.68141
1.530	1.68925
1.129	1.69596
1.064	1.69714
t	1.69812
s	1.70186
A'	1.704390
r	1.706694
C	1.708982
C'	1.709622
He-Ne	1.710219
D	1.712882
d	1.713000
e	1.716150
F	1.722196
F'	1.722950
g	1.729400
h	1.735396
0.389	1.739061
i	1.745653

Coef. disp. form. (pwr ser.)	
A0	2.87779172E+00
A1	-1.35972618E-02
A2	-2.08866139E-04
A3	2.03518573E-02
A4	2.44901642E-04
A5	1.23070041E-05
A6	-1.32629677E-07
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.013214
F'-C'	0.013328
C-t	0.010857
C-A'	0.004592
d-C	0.004018
e-C	0.007168
g-d	0.016400
g-F	0.007204
h-g	0.005996
i-g	0.016253
C'-t	0.011497
e-C'	0.006528
F'-e	0.006800
i-F'	0.022703

Relative partial dispersion	
C-t/F-C	0.8216
C-A'/F-C	0.3475
d-C/F-C	0.3041
e-C/F-C	0.5425
g-d/F-C	1.2411
g-F/F-C	0.5452
h-g/F-C	0.4538
i-g/F-C	1.2300
C'-t/F'-C'	0.8626
e-C'/F'-C'	0.4898
F'-e/F'-C'	0.5102
i-F'/F'-C'	1.7034

Deviation of relative partial disp.	
$\Delta PdC$	0.0025
$\Delta PgF$	-0.0086

Internal CC (80%/5%)	
345/268	

Color Code (80%/5%)	
365/270	

CCI	
B	0.00
G	0.43
R	0.43

Thermal properties	
CTE(-30,70) [1E-7/°C]	53
CTE(100,300) [1E-7/°C]	72
Tg [°C]	652
At [°C]	678
Ht condct. [W/m·K]	0.880
Sp. heat [kJ/kg·K]	0.566
Ht diffus. [1E-6 m2/sec]	0.417

Chemical properties [class]	
Acid res. (surface)	6
Alkaline detergent res.	3
Climate resistance	1
Water res. (powder)	1
Acid res. (powder)	4

Mechanical properties	
Knoop hardness	625 (6)
Abrasion hardness	70
Young's mod. [GPa]	112.2
Shear mod. [GPa]	43.4
Poisson's ratio	0.291
Stress optical coef. [1E-5 nm/cm/Pa]	1.89

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	0.11
290	0.19
300	0.29
310	0.40
320	0.53
330	0.65
340	0.76
350	0.84
360	0.900
370	0.938
380	0.961
390	0.973
400	0.981
420	0.987
440	0.990
460	0.993
480	0.995
500	0.997
550	0.998
600	0.998
650	0.998
700	0.998
800	0.998
900	0.999
1000	0.999
1200	0.999
1400	0.994
1600	0.993
1800	0.983
2000	0.960
2200	0.89
2400	0.63

Specific gravity	
3.72	

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.)	4.0	4.0	4.2	4.3	4.5	4.6	4.6	4.7	4.9	5.1	5.5	5.5	6.0	6.5	6.7	
60 to 80 (ref.)	3.9	4.0	4.1	4.3	4.4	4.5	4.6	4.6	4.8	5.0	5.4	5.4	5.9	6.3	6.6	
40 to 60	3.9	3.9	4.0	4.2	4.3	4.4	4.5	4.5	4.7	4.8	5.2	5.3	5.7	6.1	6.4	
20 to 40	3.8	3.8	4.0	4.1	4.2	4.4	4.4	4.4	4.6	4.8	5.1	5.2	5.6	6.0	6.3	
0 to 20	3.8	3.8	4.0	4.1	4.2	4.3	4.4	4.4	4.6	4.7	5.1	5.1	5.5	5.9	6.1	
-20 to 0	3.9	3.9	4.0	4.1	4.3	4.4	4.4	4.4	4.6	4.7	5.1	5.1	5.5	5.9	6.1	
-40 to -20	4.0	4.0	4.1	4.3	4.4	4.5	4.5	4.5	4.7	4.8	5.1	5.2	5.5	5.9	6.1	
-60 to -40 (ref.)	4.2	4.2	4.3	4.5	4.6	4.7	4.7	4.7	4.9	5.0	5.3	5.4	5.7	6.0	6.2	
-70 to -60 (ref.)	4.4	4.5	4.6	4.7	4.8	4.9	4.9	5.0	5.1	5.2	5.5	5.6	5.9	6.2	6.4	

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	3.0	3.0	3.1	3.3	3.4	3.5	3.6	3.6	3.8	4.0	4.4	4.4	4.9	5.4	5.6	
60 to 80	2.8	2.8	3.0	3.1	3.2	3.4	3.4	3.4	3.6	3.8	4.2	4.2	4.7	5.1	5.4	
40 to 60	2.6	2.6	2.8	2.9	3.0	3.1	3.2	3.2	3.4	3.5	3.9	3.9	4.4	4.8	5.0	
20 to 40	2.4	2.4	2.5	2.6	2.8	2.9	2.9	3.0	3.1	3.3	3.6	3.7	4.1	4.5	4.7	
0 to 20	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.7	2.8	3.0	3.3	3.4	3.8	4.1	4.4	
-20 to 0	1.9	1.9	2.1	2.2	2.3	2.4	2.4	2.5	2.6	2.8	3.1	3.1	3.5	3.8	4.0	
-40 to -20	1.7	1.7	1.9	2.0	2.1	2.2	2.2	2.2	2.3	2.5	2.8	2.8	3.2	3.5	3.7	
-60 to -40	1.5	1.5	1.6	1.7	1.8	1.9	1.9	2.0	2.1	2.2	2.5	2.5	2.9	3.2	3.4	
-70 to -60	1.3	1.3	1.5	1.6	1.6	1.7	1.8	1.8	1.9	2.0	2.3	2.3	2.6	2.9	3.1	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.18244084E-01
Q1	6.79365479E+01
P2	3.54569746E-02
Q2	2.27963420E-02
P3	3.49564309E-01
Q3	4.95985311E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.5	11.3
Frac. eq. (ref.)	0.7	13.1

Prod. Freq. (A to D)	B
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Similar glass type			
OHARA	S-LAL8	HOYA	LAC8
CDGM	H-LaK7A	SCHOTT	N-LAK8

2019-4-1	Transmittance
2015-4-1	Color Code, Similar glass type, Please see the revision history about others.
2009-9-1	1st edition