

# J-LAF2

$n_d = 1.744000$

$n_e = 1.747948$

$v_d = 44.81$

$v_e = 44.54$

Glass code (d)	744448
Glass code (e)	748445

Spectral l.	Refractive idx
2.058	1.70914
1.970	1.71064
1.530	1.71761
1.129	1.72413
1.064	1.72537
t	1.72642
s	1.73058
A'	1.733521
r	1.736267
C	1.739042
C'	1.739825
He-Ne	1.740557
D	1.743853
d	1.744000
e	1.747948
F	1.755647
F'	1.756617
g	1.765006
h	1.772952
0.389	1.777884
i	1.786912

Coef. disp. form. (pwr ser.)	
A0	2.96796358E+00
A1	-1.19454184E-02
A2	-1.21022641E-04
A3	2.50950364E-02
A4	5.91997830E-04
A5	-3.88364981E-06
A6	2.08885425E-06
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.016605
F'-C'	0.016792
C-t	0.012624
C-A'	0.005521
d-C	0.004958
e-C	0.008906
g-d	0.021006
g-F	0.009359
h-g	0.007946
i-g	0.021906
C'-t	0.013407
e-C'	0.008123
F'-e	0.008669
i-F'	0.030295

Relative partial dispersion	
C-t/F-C	0.7603
C-A'/F-C	0.3325
d-C/F-C	0.2986
e-C/F-C	0.5363
g-d/F-C	1.2650
g-F/F-C	0.5636
h-g/F-C	0.4785
i-g/F-C	1.3192
C'-t/F'-C'	0.7984
e-C'/F'-C'	0.4837
F'-e/F'-C'	0.5163
i-F'/F'-C'	1.8041

Deviation of relative partial disp.	
$\Delta PdC$	0.0012
$\Delta PgF$	-0.0056

Internal CC (80%/5%)	
372/338	

Color Code (80%/5%)	
390/340	

CCI	
B	0.00
G	0.82
R	0.83

Thermal properties	
CTE(-30,70) [1E-7/°C]	58
CTE(100,300) [1E-7/°C]	73
Tg [°C]	620
At [°C]	650
Ht condct. [W/m·K]	0.778
Sp. heat [kJ/kg·K]	0.511
Ht diffus. [1E-6 m2/sec]	0.366

Chemical properties [class]	
Acid res. (surface)	5
Alkaline detergent res.	2
Climate resistance	1
Water res. (powder)	1
Acid res. (powder)	4

Mechanical properties	
Knoop hardness	607 (6)
Abrasion hardness	118
Young's mod. [GPa]	97.4
Shear mod. [GPa]	37.6
Poisson's ratio	0.297
Stress optical coef. [1E-5 nm/cm/Pa]	2.32

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	0.00
290	0.00
300	0.00
310	0.00
320	0.00
330	0.00
340	0.08
350	0.30
360	0.58
370	0.77
380	0.88
390	0.929
400	0.956
420	0.978
440	0.986
460	0.991
480	0.994
500	0.996
550	0.997
600	0.997
650	0.997
700	0.998
800	0.999
900	0.999
1000	0.999
1200	0.999
1400	0.997
1600	0.993
1800	0.986
2000	0.970
2200	0.922
2400	0.76

Specific gravity	
4.16	

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.)	5.2	5.2	5.4	5.6	5.9	6.1	6.2	6.2	6.5	6.8	7.4	7.5	8.4	9.2	9.7
60 to 80 (ref.)	5.0	5.0	5.3	5.5	5.7	5.9	6.0	6.0	6.3	6.6	7.2	7.3	8.1	8.9	9.4
40 to 60	4.8	4.8	5.0	5.2	5.5	5.7	5.7	5.8	6.0	6.3	6.9	7.0	7.8	8.6	9.0
20 to 40	4.6	4.6	4.8	5.1	5.3	5.5	5.5	5.6	5.8	6.1	6.7	6.8	7.5	8.3	8.7
0 to 20	4.5	4.5	4.7	4.9	5.1	5.3	5.4	5.4	5.6	5.9	6.5	6.5	7.3	8.0	8.4
-20 to 0	4.4	4.4	4.6	4.8	5.0	5.2	5.2	5.3	5.5	5.8	6.3	6.4	7.1	7.8	8.2
-40 to -20	4.4	4.4	4.6	4.8	5.0	5.2	5.2	5.2	5.5	5.7	6.2	6.3	7.0	7.7	8.0
-60 to -40 (ref.)	4.5	4.5	4.7	4.8	5.0	5.2	5.3	5.3	5.5	5.7	6.2	6.3	7.0	7.6	7.9
-70 to -60 (ref.)	4.6	4.6	4.8	5.0	5.2	5.3	5.4	5.4	5.6	5.8	6.3	6.4	7.0	7.7	8.0

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	4.1	4.1	4.3	4.6	4.8	5.0	5.1	5.1	5.4	5.7	6.3	6.4	7.3	8.1	8.5
60 to 80	3.8	3.9	4.1	4.3	4.5	4.7	4.8	4.8	5.1	5.4	6.0	6.1	6.9	7.7	8.2
40 to 60	3.5	3.5	3.7	3.9	4.1	4.3	4.4	4.5	4.7	5.0	5.6	5.7	6.4	7.2	7.6
20 to 40	3.1	3.2	3.3	3.6	3.8	4.0	4.0	4.1	4.3	4.6	5.1	5.2	6.0	6.7	7.1
0 to 20	2.8	2.8	3.0	3.2	3.4	3.6	3.6	3.7	3.9	4.1	4.7	4.8	5.5	6.2	6.6
-20 to 0	2.4	2.4	2.6	2.8	3.0	3.2	3.2	3.3	3.5	3.7	4.3	4.3	5.0	5.7	6.1
-40 to -20	2.1	2.1	2.3	2.4	2.6	2.8	2.8	2.9	3.1	3.3	3.8	3.9	4.6	5.2	5.5
-60 to -40	1.7	1.7	1.9	2.1	2.2	2.4	2.5	2.5	2.7	2.9	3.4	3.4	4.1	4.7	5.0
-70 to -60	1.5	1.5	1.6	1.8	2.0	2.1	2.2	2.2	2.4	2.6	3.1	3.1	3.7	4.3	4.6

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.03643520E-01
Q1	7.22792806E+01
P2	1.60518064E-02
Q2	4.20912167E-02
P3	3.80053566E-01
Q3	6.33681438E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.7	4.7
Frac. eq. (ref.)	0.6	7.2

Prod. Freq. (A to D)	C
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Similar glass type			
OHARA	S-LAM2	HOYA	LAF2
CDGM	H-LaF3B	SCHOTT	N-LAF2

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