

# J-LAF09

$n_d = 1.697000$

$n_e = 1.700423$

$v_d = 48.45$

$v_e = 48.17$

Glass code (d)
697485
Glass code (e)
700482

Spectral l.	Refractive idx
2.058	1.66612
1.970	1.66748
1.530	1.67375
1.129	1.67958
1.064	1.68068
t	1.68161
s	1.68528
A'	1.687864
r	1.690266
C	1.692687
C'	1.693369
He-Ne	1.694007
D	1.696873
d	1.697000
e	1.700423
F	1.707073
F'	1.707909
g	1.715111
h	1.721892
0.389	1.726081
i	-

Coef. disp. form. (pwr ser.)	
A0	2.81748246E+00
A1	-1.05788235E-02
A2	-1.00459117E-04
A3	2.14941409E-02
A4	4.33668886E-04
A5	3.15386350E-07
A6	1.19012861E-06
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.014386
F'-C'	0.014540
C-t	0.011076
C-A'	0.004823
d-C	0.004313
e-C	0.007736
g-d	0.018111
g-F	0.008038
h-g	0.006781
i-g	-
C'-t	0.011758
e-C'	0.007054
F'-e	0.007486
i-F'	-

Relative partial dispersion	
C-t/F-C	0.7699
C-A'/F-C	0.3353
d-C/F-C	0.2998
e-C/F-C	0.5377
g-d/F-C	1.2589
g-F/F-C	0.5587
h-g/F-C	0.4714
i-g/F-C	-
C'-t/F'-C'	0.8087
e-C'/F'-C'	0.4851
F'-e/F'-C'	0.5149
i-F'/F'-C'	-

Deviation of relative partial disp.	
$\Delta PdC$	0.0007
$\Delta PgF$	-0.0043

Internal CC (80%/5%)	
367/337	
Color Code (80%/5%)	
385/340	
CCI	
B	-
G	-
R	-

Thermal properties	
CTE(-30,70) [1E-7/°C]	69
CTE(100,300) [1E-7/°C]	83
Tg [°C]	629
At [°C]	678
StP [°C]	-
AP [°C]	-
SP [°C]	-
Ht condct. [W/m·K]	0.886
Sp. heat [kJ/kg·K]	0.560
Ht diffus. [1E-6 m2/sec]	0.422

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

Mechanical properties	
Knoop hardness	590 (6)
Abrasion hardness	125
Young's mod. [GPa]	98.4
Shear mod. [GPa]	38.4
Poisson's ratio	0.281
Stress optical coef. [1E-5 nm/cm/Pa]	1.92

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	-
290	-
300	-
310	-
320	-
330	-
340	0.11
350	0.43
360	0.69
370	0.84
380	0.910
390	0.944
400	0.962
420	0.977
440	0.980
460	0.984
480	0.988
500	0.990
550	0.993
600	0.992
650	0.991
700	0.992
800	0.991
900	0.993
1000	0.991
1200	0.995
1400	0.993
1600	0.990
1800	0.983
2000	0.974
2200	0.940
2400	0.85

Specific gravity	
3.74	

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.)	2.7	2.7	2.8	3.0	3.2	3.3	3.4	3.4	3.6	3.9	4.5	4.6	5.4	6.4	-	-
60 to 80 (ref.)	2.5	2.6	2.8	2.9	3.0	3.2	3.2	3.3	3.5	3.7	4.3	4.4	5.2	6.1	-	-
40 to 60	2.4	2.5	2.6	2.7	2.9	3.0	3.1	3.1	3.3	3.5	4.1	4.1	4.9	5.8	-	-
20 to 40	2.3	2.4	2.5	2.6	2.7	2.9	2.9	3.0	3.1	3.4	3.9	3.9	4.6	5.5	-	-
0 to 20	2.2	2.3	2.4	2.5	2.7	2.8	2.8	2.8	3.0	3.2	3.7	3.8	4.4	5.2	-	-
-20 to 0	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.8	3.0	3.2	3.6	3.7	4.3	5.0	-	-
-40 to -20	2.3	2.3	2.4	2.5	2.6	2.8	2.8	2.8	3.0	3.1	3.6	3.6	4.2	4.9	-	-
-60 to -40 (ref.)	2.4	2.5	2.6	2.7	2.8	2.9	2.9	2.9	3.1	3.2	3.6	3.7	4.2	4.9	-	-
-70 to -60 (ref.)	2.6	2.7	2.8	2.9	2.9	3.0	3.1	3.1	3.2	3.4	3.7	3.8	4.3	5.0	-	-

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	1.6	1.7	1.8	2.0	2.1	2.3	2.3	2.4	2.6	2.8	3.4	3.5	4.3	5.3	-	-
60 to 80	1.4	1.5	1.6	1.8	1.9	2.0	2.1	2.1	2.3	2.6	3.1	3.2	4.0	4.9	-	-
40 to 60	1.1	1.2	1.3	1.5	1.6	1.7	1.8	1.8	2.0	2.2	2.7	2.8	3.5	4.4	-	-
20 to 40	0.9	0.9	1.0	1.2	1.3	1.4	1.4	1.5	1.7	1.9	2.4	2.4	3.1	4.0	-	-
0 to 20	0.6	0.6	0.8	0.9	1.0	1.1	1.1	1.2	1.3	1.5	2.0	2.0	2.7	3.5	-	-
-20 to 0	0.3	0.3	0.5	0.6	0.7	0.8	0.8	0.8	1.0	1.2	1.6	1.7	2.3	3.0	-	-
-40 to -20	0.0	0.1	0.2	0.3	0.4	0.5	0.5	0.5	0.7	0.8	1.2	1.3	1.8	2.5	-	-
-60 to -40	-0.3	-0.2	-0.1	0.0	0.1	0.1	0.2	0.2	0.3	0.5	0.8	0.9	1.4	2.0	-	-
-70 to -60	-0.5	-0.4	-0.3	-0.3	-0.2	-0.1	-0.1	0.0	0.1	0.2	0.5	0.6	1.1	1.7	-	-

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.13255310E-01
Q1	8.32858494E+01
P2	1.63055541E-02
Q2	3.79087968E-02
P3	3.60955138E-01
Q3	6.03412046E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.6	6.7
Frac. eq. (ref.)	0.6	7.6

Prod. Freq. (A to D)	D
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Similar glass type			
OHARA	-	HOYA	-
CDGM	-	SCHOTT	-

2020-4-1	Similar glass type
2019-4-1	Transmittance
2018-4-1	Prod. Freq.