

J-LAF01

 $n_d = 1.700000$ $n_e = 1.703462$ $v_d = 48.11$ $v_e = 47.82$

Glass code (d)
700481
Glass code (e)
703478

Spectral l.	Refractive idx
2.058	1.66933
1.970	1.67064
1.530	1.67675
1.129	1.68250
1.064	1.68359
t	1.68452
s	1.68819
A'	1.690785
r	1.693203
C	1.695645
C'	1.696333
He-Ne	1.696977
D	1.699871
d	1.700000
e	1.703462
F	1.710196
F'	1.711043
g	1.718350
h	1.725242
0.389	1.729503
i	-

Coef. disp. form. (pwr ser.)	
A0	2.82684251E+00
A1	-1.03793494E-02
A2	-7.59583803E-05
A3	2.16620460E-02
A4	4.72548975E-04
A5	-2.58637501E-06
A6	1.43317138E-06
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.014551
F'-C'	0.014710
C-t	0.011126
C-A'	0.004860
d-C	0.004355
e-C	0.007817
g-d	0.018350
g-F	0.008154
h-g	0.006892
i-g	-
C'-t	0.011814
e-C'	0.007129
F'-e	0.007581
i-F'	-

Relative partial dispersion	
C-t/F-C	0.7646
C-A'/F-C	0.3340
d-C/F-C	0.2993
e-C/F-C	0.5372
g-d/F-C	1.2611
g-F/F-C	0.5604
h-g/F-C	0.4736
i-g/F-C	-
C'-t/F'-C'	0.8031
e-C'/F'-C'	0.4846
F'-e/F'-C'	0.5154
i-F'/F'-C'	-

Deviation of relative partial disp.	
ΔPdC	0.0004
ΔPgF	-0.0033

Internal CC (80%/5%)	
369/336	
Color Code (80%/5%)	
385/335	
CCI	
B	0.00
G	0.66
R	0.63

Thermal properties	
CTE(-30,70) [1E-7/°C]	73
CTE(100,300) [1E-7/°C]	85
Tg [°C]	657
At [°C]	693
StP [°C]	615
AP [°C]	650
SP [°C]	776
Ht condct. [W/m·K]	0.811
Sp. heat [kJ/kg·K]	0.545
Ht diffus. [1E-6 m2/sec]	0.403

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	575 (6)
Abrasion hardness	155
Young's mod. [GPa]	96.1
Shear mod. [GPa]	37.3
Poisson's ratio	0.287
Stress optical coef. [1E-5 nm/cm/Pa]	1.80

Internal trans. (10mm)		
λ [nm]	τ	
280	-	
290	-	
300	-	
310	-	
320	-	
330	0.01	
340	0.11	
350	0.36	
360	0.64	
370	0.82	
380	0.902	
390	0.944	
400	0.966	
420	0.983	
440	0.988	
460	0.991	
480	0.994	
500	0.996	
550	0.998	
600	0.996	
650	0.996	
700	0.997	
800	0.996	
900	0.995	
1000	0.995	
1200	0.995	
1400	0.994	
1600	0.989	
1800	0.980	
2000	0.966	
2200	0.925	
2400	0.81	

Specific gravity
3.68

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.)	2.0	2.1	2.2	2.5	2.6	2.8	2.8	2.9	3.1	3.4	3.9	4.0	4.6	-	-	-
60 to 80 (ref.)	1.9	2.0	2.2	2.4	2.5	2.7	2.7	2.8	3.0	3.2	3.8	3.8	4.5	-	-	-
40 to 60	1.8	1.9	2.1	2.2	2.4	2.5	2.6	2.6	2.8	3.1	3.6	3.7	4.3	-	-	-
20 to 40	1.7	1.8	2.0	2.1	2.3	2.5	2.5	2.5	2.7	3.0	3.5	3.5	4.1	-	-	-
0 to 20	1.7	1.8	2.0	2.1	2.2	2.4	2.4	2.5	2.7	2.9	3.4	3.4	4.0	-	-	-
-20 to 0	1.7	1.8	2.0	2.1	2.2	2.4	2.4	2.5	2.6	2.9	3.3	3.4	3.9	-	-	-
-40 to -20	1.8	1.9	2.0	2.2	2.3	2.4	2.5	2.5	2.7	2.9	3.3	3.4	3.9	-	-	-
-60 to -40 (ref.)	2.0	2.0	2.2	2.3	2.5	2.6	2.6	2.7	2.8	3.0	3.5	3.5	4.0	-	-	-
-70 to -60 (ref.)	2.2	2.2	2.4	2.5	2.7	2.8	2.8	2.9	3.0	3.2	3.6	3.7	4.2	-	-	-

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	1.0	1.0	1.2	1.4	1.6	1.7	1.8	1.8	2.0	2.3	2.8	2.9	3.5	-	-	-
60 to 80	0.8	0.8	1.1	1.2	1.4	1.5	1.6	1.6	1.8	2.1	2.6	2.7	3.3	-	-	-
40 to 60	0.5	0.6	0.8	0.9	1.1	1.3	1.3	1.3	1.5	1.8	2.3	2.3	2.9	-	-	-
20 to 40	0.3	0.3	0.5	0.7	0.8	1.0	1.0	1.1	1.3	1.5	2.0	2.0	2.6	-	-	-
0 to 20	0.0	0.1	0.3	0.4	0.6	0.7	0.7	0.8	1.0	1.2	1.6	1.7	2.2	-	-	-
-20 to 0	-0.2	-0.2	0.0	0.2	0.3	0.4	0.5	0.5	0.7	0.9	1.3	1.4	1.9	-	-	-
-40 to -20	-0.5	-0.4	-0.2	-0.1	0.0	0.1	0.2	0.2	0.4	0.6	1.0	1.0	1.5	-	-	-
-60 to -40	-0.7	-0.7	-0.5	-0.4	-0.2	-0.1	-0.1	-0.1	0.1	0.3	0.7	0.7	1.2	-	-	-
-70 to -60	-0.9	-0.8	-0.7	-0.6	-0.5	-0.3	-0.3	-0.3	-0.1	0.1	0.4	0.5	0.9	-	-	-

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.24405553E-01
Q1	9.40421199E+01
P2	1.85633188E-02
Q2	3.72381886E-02
P3	3.59893584E-01
Q3	5.90236401E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.5	3.3
Frac. eq. (ref.)	0.7	2.7

Prod. Freq. (A to D)	C
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Similar glass type			
OHARA	-	HOYA	-
CDGM	H-LaF51	SCHOTT	-

2022-7-1	StP, AP, SP
2020-4-1	Similar glass type
2019-4-1	Transmittance