

J-LAF05

$n_d = 1.762000$

$n_e = 1.766511$

$v_d = 40.11$

$v_e = 39.85$

Glass code (d)
762401
Glass code (e)
767399

Spectral l.	Refractive idx
2.058	1.72631
1.970	1.72760
1.530	1.73385
1.129	1.74018
1.064	1.74145
t	1.74254
s	1.74699
A'	1.750213
r	1.753266
C	1.756381
C'	1.757264
He-Ne	1.758092
D	1.761833
d	1.762000
e	1.766511
F	1.775377
F'	1.776499
g	1.786251
h	1.795554
0.389	1.801358
i	1.812041

Coef. disp. form. (pwr ser.)	
A0	3.01897142E+00
A1	-1.06135241E-02
A2	-3.56215294E-05
A3	2.84177137E-02
A4	8.43869366E-04
A5	-1.12827377E-05
A6	3.11337221E-06
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.018996
F'-C'	0.019235
C-t	0.013839
C-A'	0.006168
d-C	0.005619
e-C	0.010130
g-d	0.024251
g-F	0.010874
h-g	0.009303
i-g	0.025790
C'-t	0.014722
e-C'	0.009247
F'-e	0.009988
i-F'	0.035542

Relative partial dispersion	
C-t/F-C	0.7285
C-A'/F-C	0.3247
d-C/F-C	0.2958
e-C/F-C	0.5333
g-d/F-C	1.2766
g-F/F-C	0.5724
h-g/F-C	0.4897
i-g/F-C	1.3577
C'-t/F'-C'	0.7654
e-C'/F'-C'	0.4807
F'-e/F'-C'	0.5193
i-F'/F'-C'	1.8478

Deviation of relative partial disp.	
ΔPdC	0.0005
ΔPgF	-0.0046

Internal CC (80%/5%)	
365/332	
Color Code (80%/5%)	
390/330	
CCI	
B	-
G	-
R	-

Thermal properties	
CTE(-30,70) [1E-7/°C]	63
CTE(100,300) [1E-7/°C]	78
Tg [°C]	606
At [°C]	645
StP [°C]	565
AP [°C]	600
SP [°C]	727
Ht condct. [W/m·K]	0.960
Sp. heat [kJ/kg·K]	0.577
Ht diffus. [1E-6 m2/sec]	0.422

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	406 (4)
Abrasion hardness	109
Young's mod. [GPa]	116.3
Shear mod. [GPa]	47.3
Poisson's ratio	0.228
Stress optical coef. [1E-5 nm/cm/Pa]	2.85

Internal trans. (10mm)		
λ [nm]	τ	
280	-	
290	-	
300	-	
310	-	
320	-	
330	0.02	
340	0.25	
350	0.55	
360	0.74	
370	0.85	
380	0.907	
390	0.939	
400	0.958	
420	0.974	
440	0.981	
460	0.985	
480	0.989	
500	0.991	
550	0.993	
600	0.994	
650	0.993	
700	0.992	
800	0.989	
900	0.995	
1000	0.994	
1200	0.996	
1400	0.995	
1600	0.991	
1800	0.986	
2000	0.978	
2200	0.959	
2400	0.87	

Specific gravity	
3.94	

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.)	8.0	8.1	8.3	8.6	8.9	9.2	9.3	9.3	9.7	10.2	11.1	11.2	12.3	13.5	14.2	
60 to 80 (ref.)	7.8	7.9	8.2	8.4	8.7	9.0	9.1	9.1	9.5	9.9	10.8	11.0	12.1	13.2	13.9	
40 to 60	7.6	7.7	7.9	8.2	8.4	8.7	8.8	8.9	9.2	9.6	10.5	10.6	11.7	12.8	13.4	
20 to 40	7.4	7.5	7.7	8.0	8.2	8.5	8.6	8.6	9.0	9.4	10.2	10.3	11.4	12.4	13.0	
0 to 20	7.3	7.3	7.6	7.8	8.1	8.3	8.4	8.5	8.8	9.2	10.0	10.1	11.1	12.1	12.7	
-20 to 0	7.2	7.2	7.5	7.7	7.9	8.2	8.2	8.3	8.6	9.0	9.8	9.9	10.8	11.8	12.4	
-40 to -20	7.1	7.2	7.4	7.7	7.9	8.1	8.2	8.3	8.6	8.9	9.7	9.8	10.7	11.6	12.2	
-60 to -40 (ref.)	7.2	7.3	7.5	7.7	7.9	8.2	8.2	8.3	8.6	8.9	9.7	9.8	10.6	11.5	12.1	
-70 to -60 (ref.)	7.4	7.4	7.6	7.8	8.1	8.3	8.3	8.4	8.7	9.0	9.7	9.8	10.7	11.5	12.1	

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	6.9	7.0	7.3	7.5	7.8	8.1	8.2	8.3	8.6	9.1	10.0	10.1	11.2	12.3	13.1	
60 to 80	6.6	6.7	7.0	7.2	7.5	7.8	7.9	7.9	8.3	8.7	9.6	9.7	10.8	11.9	12.6	
40 to 60	6.3	6.3	6.6	6.9	7.1	7.4	7.5	7.5	7.9	8.3	9.2	9.3	10.3	11.4	12.0	
20 to 40	5.9	6.0	6.2	6.5	6.7	7.0	7.0	7.1	7.4	7.8	8.7	8.8	9.8	10.8	11.4	
0 to 20	5.5	5.6	5.8	6.1	6.3	6.6	6.6	6.7	7.0	7.4	8.2	8.3	9.3	10.2	10.9	
-20 to 0	5.2	5.2	5.5	5.7	5.9	6.2	6.2	6.3	6.6	7.0	7.7	7.8	8.7	9.7	10.3	
-40 to -20	4.8	4.9	5.1	5.3	5.5	5.7	5.8	5.9	6.2	6.5	7.2	7.3	8.2	9.1	9.7	
-60 to -40	4.4	4.5	4.7	4.9	5.1	5.3	5.4	5.5	5.7	6.1	6.8	6.9	7.7	8.6	9.1	
-70 to -60	4.2	4.2	4.4	4.6	4.8	5.0	5.1	5.1	5.4	5.7	6.4	6.5	7.3	8.1	8.7	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.12020693E-01
Q1	9.19206483E+01
P2	2.91343182E-02
Q2	3.83429496E-02
P3	3.73059130E-01
Q3	6.25915395E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.5	7.2
Frac. eq. (ref.)	1.2	9.0

Prod. Freq. (A to D)	C
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Similar glass type			
OHARA	S-LAM55	HOYA	-
CDGM	H-LaF55	SCHOTT	-

2022-7-1	StP, AP, SP
2020-4-1	chemical properties
2019-4-1	Transmittance