

J-LASF05

$n_d = 1.834810$

$n_e = 1.839454$

$v_d = 42.73$

$v_e = 42.48$

Glass code (d)
835427
Glass code (e)
839425

Spectral l.	Refractive idx
2.058	1.79536
1.970	1.79697
1.530	1.80451
1.129	1.81173
1.064	1.81314
t	1.81433
s	1.81912
A'	1.822536
r	1.825740
C	1.828989
C'	1.829907
He-Ne	1.830766
D	1.834638
d	1.834810
e	1.839454
F	1.848524
F'	1.849668
g	1.859557
h	1.868920
0.389	1.874725
i	1.885334

Coef. disp. form. (pwr ser.)	
A0	3.27458352E+00
A1	-1.32752140E-02
A2	-1.35438033E-04
A3	3.11933067E-02
A4	7.11503841E-04
A5	3.51334559E-06
A6	1.88560229E-06
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.019535
F'-C'	0.019761
C-t	0.014655
C-A'	0.006453
d-C	0.005821
e-C	0.010465
g-d	0.024747
g-F	0.011033
h-g	0.009363
i-g	0.025777
C'-t	0.015573
e-C'	0.009547
F'-e	0.010214
i-F'	0.035666

Relative partial dispersion	
C-t/F-C	0.7502
C-A'/F-C	0.3303
d-C/F-C	0.2980
e-C/F-C	0.5357
g-d/F-C	1.2668
g-F/F-C	0.5648
h-g/F-C	0.4793
i-g/F-C	1.3195
C'-t/F'-C'	0.7881
e-C'/F'-C'	0.4831
F'-e/F'-C'	0.5169
i-F'/F'-C'	1.8049

Deviation of relative partial disp.	
ΔPdC	0.0015
ΔPgF	-0.0079

Internal CC (80%/5%)	
365/320	
Color Code (80%/5%)	
405/320	
CCI	
B	0.00
G	0.88
R	0.92

Thermal properties	
CTE(-30,70) [1E-7/°C]	55
CTE(100,300) [1E-7/°C]	77
Tg [°C]	674
At [°C]	708
StP [°C]	627
AP [°C]	658
SP [°C]	768
Ht condct. [W/m·K]	0.907
Sp. heat [kJ/kg·K]	0.501
Ht diffus. [1E-6 m2/sec]	0.378

Chemical properties [class]	
Acid res. (surface)	1
Alkaline detergent res.	1
Climate resistance	1
Water res. (powder)	2
Acid res. (powder)	3

Mechanical properties	
Knoop hardness	611 (6)
Abrasion hardness	75
Young's mod. [GPa]	119.8
Shear mod. [GPa]	46.0
Poisson's ratio	0.303
Stress optical coef. [1E-5 nm/cm/Pa]	1.49

Internal trans. (10mm)	
λ [nm]	τ
280	-
290	-
300	-
310	-
320	0.05
330	0.20
340	0.43
350	0.63
360	0.76
370	0.85
380	0.904
390	0.937
400	0.956
420	0.975
440	0.983
460	0.989
480	0.992
500	0.995
550	0.998
600	0.998
650	0.999
700	0.998
800	0.998
900	0.997
1000	0.997
1200	0.998
1400	0.999
1600	0.994
1800	0.988
2000	0.973
2200	0.938
2400	0.78

Specific gravity
4.79

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.)	4.3	4.4	4.6	4.9	5.1	5.3	5.4	5.4	5.7	6.0	6.8	6.9	7.7	8.7	9.3	
60 to 80 (ref.)	4.2	4.3	4.6	4.7	4.9	5.2	5.2	5.3	5.6	5.9	6.6	6.7	7.5	8.5	9.1	
40 to 60	4.1	4.1	4.4	4.6	4.8	5.0	5.0	5.1	5.4	5.7	6.4	6.5	7.3	8.2	8.8	
20 to 40	3.9	4.0	4.3	4.5	4.7	4.8	4.9	5.0	5.2	5.5	6.2	6.3	7.1	7.9	8.5	
0 to 20	3.9	4.0	4.2	4.4	4.6	4.8	4.8	4.9	5.1	5.4	6.0	6.1	6.9	7.7	8.3	
-20 to 0	3.9	3.9	4.2	4.4	4.5	4.7	4.8	4.8	5.1	5.4	6.0	6.0	6.8	7.6	8.1	
-40 to -20	3.9	4.0	4.2	4.4	4.6	4.8	4.8	4.9	5.1	5.4	5.9	6.0	6.7	7.5	8.1	
-60 to -40 (ref.)	4.1	4.2	4.4	4.6	4.7	4.9	4.9	5.0	5.2	5.5	6.0	6.1	6.8	7.6	8.1	
-70 to -60 (ref.)	4.3	4.4	4.6	4.8	4.9	5.1	5.1	5.2	5.4	5.7	6.2	6.3	7.0	7.7	8.2	

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	3.2	3.3	3.5	3.7	3.9	4.2	4.2	4.3	4.6	4.9	5.6	5.7	6.6	7.5	8.1	
60 to 80	3.0	3.1	3.3	3.5	3.7	3.9	4.0	4.0	4.3	4.6	5.3	5.4	6.3	7.2	7.8	
40 to 60	2.7	2.8	3.0	3.2	3.4	3.6	3.6	3.7	4.0	4.3	4.9	5.0	5.8	6.7	7.3	
20 to 40	2.4	2.5	2.7	2.9	3.1	3.3	3.3	3.4	3.6	3.9	4.6	4.6	5.4	6.3	6.8	
0 to 20	2.1	2.2	2.4	2.6	2.7	2.9	3.0	3.0	3.3	3.6	4.2	4.3	5.0	5.8	6.4	
-20 to 0	1.8	1.9	2.1	2.3	2.4	2.6	2.7	2.7	2.9	3.2	3.8	3.9	4.6	5.4	5.9	
-40 to -20	1.5	1.6	1.8	1.9	2.1	2.3	2.3	2.4	2.6	2.9	3.4	3.5	4.2	4.9	5.4	
-60 to -40	1.2	1.3	1.5	1.6	1.8	1.9	2.0	2.0	2.2	2.5	3.0	3.1	3.8	4.5	5.0	
-70 to -60	1.0	1.0	1.2	1.4	1.5	1.7	1.7	1.8	2.0	2.2	2.8	2.8	3.5	4.2	4.6	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.07685998E-01
Q1	7.57647015E+01
P2	2.51666246E-02
Q2	3.62464825E-02
P3	4.06060216E-01
Q3	6.09115841E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.7	6.0
Frac. eq. (ref.)	0.6	7.2

Prod. Freq. (A to D)	A
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Similar glass type			
OHARA	S-LAH55VS	HOYA	TAFD5F, TAFD5G
CDGM	H-ZLaF55D	SCHOTT	N-LASF41

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