

J-LASF03

$n_d = 1.806100$

$n_e = 1.810772$

$v_d = 40.97$

$v_e = 40.73$

Glass code (d)	806410
Glass code (e)	811407

Spectral l.	Refractive idx
2.058	1.76515
1.970	1.76691
1.530	1.77510
1.129	1.78273
1.064	1.78419
t	1.78542
s	1.79030
A'	1.793753
r	1.796981
C	1.800248
C'	1.801171
He-Ne	1.802035
D	1.805927
d	1.806100
e	1.810772
F	1.819921
F'	1.821077
g	1.831111
h	1.840675
0.389	1.846641
i	1.857625

Coef. disp. form. (pwr ser.)	
A0	3.17262102E+00
A1	-1.44956612E-02
A2	-1.48050666E-04
A3	3.02384298E-02
A4	7.95161351E-04
A5	-3.21543048E-06
A6	3.05533181E-06
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.019673
F'-C'	0.019906
C-t	0.014828
C-A'	0.006495
d-C	0.005852
e-C	0.010524
g-d	0.025011
g-F	0.011190
h-g	0.009564
i-g	0.026514
C'-t	0.015751
e-C'	0.009601
F'-e	0.010305
i-F'	0.036548

Relative partial dispersion	
C-t/F-C	0.7537
C-A'/F-C	0.3301
d-C/F-C	0.2975
e-C/F-C	0.5349
g-d/F-C	1.2713
g-F/F-C	0.5688
h-g/F-C	0.4861
i-g/F-C	1.3477
C'-t/F'-C'	0.7913
e-C'/F'-C'	0.4823
F'-e/F'-C'	0.5177
i-F'/F'-C'	1.8360

Deviation of relative partial disp.	
ΔPdC	0.0018
ΔPgF	-0.0068

Internal CC (80%/5%)	
371/328	

Color Code (80%/5%)	
410/330	

CCI	
B	0.00
G	1.30
R	1.35

Thermal properties	
CTE(-30,70) [1E-7/°C]	52
CTE(100,300) [1E-7/°C]	65
Tg [°C]	620
At [°C]	650
Ht condct. [W/m·K]	0.861
Sp. heat [kJ/kg·K]	0.499
Ht diffus. [1E-6 m2/sec]	0.400

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

Mechanical properties	
Knoop hardness	643 (6)
Abrasion hardness	78
Young's mod. [GPa]	114.0
Shear mod. [GPa]	43.9
Poisson's ratio	0.297
Stress optical coef. [1E-5 nm/cm/Pa]	2.15

Internal trans. (10mm)	
λ [nm]	τ
280	0.00
290	0.00
300	0.00
310	0.00
320	0.00
330	0.07
340	0.25
350	0.49
360	0.67
370	0.79
380	0.86
390	0.910
400	0.936
420	0.964
440	0.976
460	0.983
480	0.989
500	0.993
550	0.997
600	0.998
650	0.998
700	0.999
800	0.997
900	0.996
1000	0.996
1200	0.997
1400	0.992
1600	0.989
1800	0.975
2000	0.953
2200	0.88
2400	0.67

Specific gravity	
4.31	

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.)	5.9	6.0	6.2	6.5	6.7	6.9	7.0	7.1	7.4	7.8	8.6	8.7	9.6	10.6	11.3	
60 to 80 (ref.)	5.7	5.8	6.1	6.3	6.5	6.7	6.8	6.9	7.2	7.5	8.3	8.4	9.3	10.3	10.9	
40 to 60	5.5	5.6	5.8	6.0	6.2	6.5	6.5	6.6	6.9	7.2	7.9	8.0	8.9	9.9	10.5	
20 to 40	5.3	5.4	5.6	5.8	6.0	6.2	6.3	6.3	6.6	7.0	7.6	7.7	8.6	9.5	10.0	
0 to 20	5.2	5.2	5.4	5.6	5.8	6.0	6.1	6.1	6.4	6.7	7.4	7.5	8.3	9.1	9.7	
-20 to 0	5.1	5.1	5.3	5.5	5.7	5.9	5.9	6.0	6.3	6.6	7.2	7.3	8.0	8.8	9.4	
-40 to -20	5.0	5.1	5.3	5.5	5.6	5.8	5.9	5.9	6.2	6.5	7.1	7.1	7.9	8.6	9.1	
-60 to -40 (ref.)	5.1	5.2	5.3	5.5	5.7	5.9	5.9	6.0	6.2	6.5	7.0	7.1	7.8	8.5	9.0	
-70 to -60 (ref.)	5.3	5.3	5.5	5.6	5.8	6.0	6.0	6.1	6.3	6.6	7.1	7.2	7.8	8.5	9.0	

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	4.8	4.9	5.1	5.4	5.6	5.8	5.9	6.0	6.3	6.6	7.4	7.5	8.5	9.4	10.1	
60 to 80	4.5	4.6	4.8	5.1	5.3	5.5	5.6	5.6	5.9	6.3	7.0	7.1	8.1	9.0	9.6	
40 to 60	4.2	4.2	4.5	4.7	4.9	5.1	5.1	5.2	5.5	5.8	6.5	6.6	7.5	8.4	9.0	
20 to 40	3.8	3.8	4.1	4.3	4.5	4.7	4.7	4.8	5.0	5.4	6.1	6.1	7.0	7.8	8.4	
0 to 20	3.4	3.5	3.7	3.8	4.0	4.2	4.3	4.3	4.6	4.9	5.6	5.6	6.4	7.3	7.8	
-20 to 0	3.0	3.1	3.3	3.4	3.6	3.8	3.9	3.9	4.2	4.5	5.1	5.1	5.9	6.7	7.2	
-40 to -20	2.7	2.7	2.9	3.0	3.2	3.4	3.4	3.5	3.7	4.0	4.6	4.6	5.4	6.1	6.6	
-60 to -40	2.3	2.3	2.5	2.6	2.8	3.0	3.0	3.1	3.3	3.5	4.1	4.1	4.8	5.5	5.9	
-70 to -60	2.0	2.0	2.2	2.3	2.5	2.6	2.7	2.7	2.9	3.2	3.7	3.8	4.4	5.1	5.5	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.16842249E-01
Q1	7.25891074E+01
P2	2.16356451E-02
Q2	4.21702012E-02
P3	3.98366606E-01
Q3	6.31251150E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.8	2.5
Frac. eq. (ref.)	0.7	3.4

Prod. Freq. (A to D)	A
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Similar glass type			
OHARA	S-LAH53	HOYA	NBFD13
CDGM	H-ZLaF52	SCHOTT	N-LASF43

2019-4-1	Transmittance
2015-4-1	Color Code, Similar glass type
2011-2-1	Stress optical coefficient, Similar glass type