

J-LASF010

$n_d = 1.834000$

$n_e = 1.839319$

$v_d = 37.18$

$v_e = 36.94$

Glass code (d)	834372
Glass code (e)	839369

Spectral l.	Refractive idx
2.058	1.78975
1.970	1.79154
1.530	1.79993
1.129	1.80799
1.064	1.80956
t	1.81089
s	1.81625
A'	1.820090
r	1.823703
C	1.827379
C'	1.828420
He-Ne	1.829395
D	1.833803
d	1.834000
e	1.839319
F	1.849808
F'	1.851140
g	1.862767
h	1.873960
0.389	1.881006
i	1.894125

Coef. disp. form. (pwr ser.)	
A0	3.25964047E+00
A1	-1.45636865E-02
A2	-1.71298494E-04
A3	3.51194196E-02
A4	6.30621917E-04
A5	9.80352299E-05
A6	-8.04182070E-06
A7	6.28587289E-07
A8	0.00000000E+00

Partial dispersion	
F-C	0.022429
F'-C'	0.022720
C-t	0.016489
C-A'	0.007289
d-C	0.006621
e-C	0.011940
g-d	0.028767
g-F	0.012959
h-g	0.011193
i-g	0.031358
C'-t	0.017530
e-C'	0.010899
F'-e	0.011821
i-F'	0.042985

Relative partial dispersion	
C-t/F-C	0.7352
C-A'/F-C	0.3250
d-C/F-C	0.2952
e-C/F-C	0.5323
g-d/F-C	1.2826
g-F/F-C	0.5778
h-g/F-C	0.4990
i-g/F-C	1.3981
C'-t/F'-C'	0.7716
e-C'/F'-C'	0.4797
F'-e/F'-C'	0.5203
i-F'/F'-C'	1.8919

Deviation of relative partial disp.	
ΔPdC	0.0012
ΔPgF	-0.0042

Internal CC (80%/5%)	
378/343	

Color Code (80%/5%)	
425/345	

CCI	
B	0.00
G	1.64
R	1.77

Thermal properties	
CTE(-30,70) [1E-7/°C]	54
CTE(100,300) [1E-7/°C]	68
Tg [°C]	628
At [°C]	664
Ht condct. [W/m·K]	0.947
Sp. heat [kJ/kg·K]	0.541
Ht diffus. [1E-6 m2/sec]	0.409

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

Mechanical properties	
Knoop hardness	639 (6)
Abrasion hardness	71
Young's mod. [GPa]	116.7
Shear mod. [GPa]	45.0
Poisson's ratio	0.297
Stress optical coef. [1E-5 nm/cm/Pa]	2.21

Internal trans. (10mm)	
λ [nm]	τ
280	0.00
290	0.00
300	0.00
310	0.00
320	0.00
330	0.00
340	0.03
350	0.18
360	0.46
370	0.70
380	0.82
390	0.88
400	0.919
420	0.955
440	0.970
460	0.979
480	0.985
500	0.990
550	0.996
600	0.998
650	0.998
700	0.999
800	0.998
900	0.997
1000	0.997
1200	0.998
1400	0.997
1600	0.992
1800	0.982
2000	0.965
2200	0.910
2400	0.72

Specific gravity	
4.28	

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.)	6.3	6.4	6.7	7.0	7.3	7.6	7.7	7.7	8.1	8.5	9.4	9.6	10.7	12.0	12.9	
60 to 80 (ref.)	6.1	6.2	6.6	6.8	7.0	7.3	7.4	7.4	7.8	8.2	9.1	9.2	10.4	11.6	12.4	
40 to 60	5.8	5.9	6.2	6.5	6.7	6.9	7.0	7.1	7.4	7.8	8.7	8.8	9.9	11.0	11.9	
20 to 40	5.5	5.6	5.9	6.2	6.4	6.6	6.7	6.8	7.1	7.5	8.3	8.4	9.4	10.6	11.3	
0 to 20	5.3	5.4	5.7	5.9	6.1	6.4	6.4	6.5	6.8	7.2	7.9	8.0	9.0	10.1	10.9	
-20 to 0	5.1	5.2	5.5	5.7	5.9	6.1	6.2	6.3	6.6	6.9	7.7	7.8	8.7	9.7	10.4	
-40 to -20	5.0	5.1	5.4	5.6	5.8	6.0	6.1	6.1	6.4	6.7	7.4	7.5	8.4	9.4	10.1	
-60 to -40 (ref.)	5.0	5.1	5.4	5.6	5.8	6.0	6.0	6.1	6.3	6.7	7.3	7.4	8.3	9.2	9.9	
-70 to -60 (ref.)	5.1	5.2	5.5	5.6	5.8	6.0	6.1	6.1	6.4	6.7	7.3	7.4	8.3	9.2	9.8	

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	5.2	5.3	5.7	5.9	6.2	6.4	6.5	6.6	6.9	7.4	8.3	8.4	9.6	10.8	11.7	
60 to 80	4.9	5.0	5.3	5.6	5.8	6.1	6.1	6.2	6.5	7.0	7.8	8.0	9.1	10.3	11.1	
40 to 60	4.4	4.5	4.8	5.1	5.3	5.6	5.6	5.7	6.0	6.4	7.3	7.4	8.4	9.6	10.4	
20 to 40	4.0	4.1	4.4	4.6	4.8	5.0	5.1	5.2	5.5	5.9	6.7	6.8	7.8	8.9	9.7	
0 to 20	3.5	3.6	3.9	4.1	4.3	4.5	4.6	4.7	5.0	5.3	6.1	6.2	7.1	8.2	8.9	
-20 to 0	3.1	3.1	3.4	3.6	3.8	4.0	4.1	4.2	4.4	4.8	5.5	5.6	6.5	7.5	8.2	
-40 to -20	2.6	2.7	2.9	3.1	3.3	3.5	3.6	3.6	3.9	4.2	4.9	5.0	5.9	6.8	7.5	
-60 to -40	2.2	2.2	2.5	2.7	2.8	3.0	3.1	3.1	3.4	3.7	4.3	4.4	5.2	6.1	6.8	
-70 to -60	1.8	1.9	2.1	2.3	2.5	2.6	2.7	2.7	3.0	3.3	3.9	4.0	4.7	5.6	6.2	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.04623045E-01
Q1	6.64846075E+01
P2	2.01481579E-02
Q2	4.84277053E-02
P3	4.09502477E-01
Q3	6.84010411E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.7	6.8
Frac. eq. (ref.)	1.5	13.0

Prod. Freq. (A to D)	A
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Similar glass type			
OHARA	S-LAH60	HOYA	NBFD10
CDGM	H-ZLaF53B	SCHOTT	N-LASF40

2019-4-1	Transmittance
2015-4-1	Color Code, Prod. Freq., Similar glass type
2009-9-1	1st edition