

J-LASFH9A

$n_d = 1.902650$

$n_e = 1.908632$

$v_d = 35.77$

$v_e = 35.52$

Glass code (d)	903358
Glass code (e)	909355

Spectral l.	Refractive idx
2.058	1.85645
1.970	1.85810
1.530	1.86602
1.129	1.87410
1.064	1.87574
t	1.87715
s	1.88293
A'	1.887140
r	1.891140
C	1.895235
C'	1.896397
He-Ne	1.897488
D	1.902429
d	1.902650
e	1.908632
F	1.920469
F'	1.921975
g	1.935143
h	1.947853
0.389	1.955869
i	1.970835

Coef. disp. form. (pwr ser.)	
A0	3.49725259E+00
A1	-1.37767486E-02
A2	-1.24635517E-04
A3	4.10568814E-02
A4	7.21039098E-04
A5	1.36134140E-04
A6	-1.24733129E-05
A7	9.24974680E-07
A8	0.00000000E+00

Partial dispersion	
F-C	0.025234
F'-C'	0.025578
C-t	0.018087
C-A'	0.008095
d-C	0.007415
e-C	0.013397
g-d	0.032493
g-F	0.014674
h-g	0.012710
i-g	0.035692
C'-t	0.019249
e-C'	0.012235
F'-e	0.013343
i-F'	0.048860

Relative partial dispersion	
C-t/F-C	0.7168
C-A'/F-C	0.3208
d-C/F-C	0.2938
e-C/F-C	0.5309
g-d/F-C	1.2877
g-F/F-C	0.5815
h-g/F-C	0.5037
i-g/F-C	1.4144
C'-t/F'-C'	0.7526
e-C'/F'-C'	0.4783
F'-e/F'-C'	0.5217
i-F'/F'-C'	1.9102

Deviation of relative partial disp.	
ΔPdC	0.0005
ΔPgF	-0.0028

Internal CC (80%/5%)	
381/350	

Color Code (70%/5%)	
390/350	

CCI	
B	0.00
G	1.87
R	1.95

Thermal properties	
CTE(-30,70) [1E-7/°C]	62
CTE(100,300) [1E-7/°C]	80
Tg [°C]	701
At [°C]	738
Ht condct. [W/m·K]	0.846
Sp. heat [kJ/kg·K]	0.457
Ht diffus. [1E-6 m2/sec]	0.377

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

Mechanical properties	
Knoop hardness	603 (6)
Abrasion hardness	67
Young's mod. [GPa]	123.3
Shear mod. [GPa]	47.3
Poisson's ratio	0.303
Stress optical coef. [1E-5 nm/cm/Pa]	0.97

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	0.00
350	0.06
360	0.33
370	0.62
380	0.79
390	0.87
400	0.912
420	0.950
440	0.967
460	0.977
480	0.984
500	0.989
550	0.996
600	0.997
650	0.997
700	0.997
800	0.998
900	0.999
1000	0.998
1200	0.997
1400	0.994
1600	0.990
1800	0.983
2000	0.963
2200	0.914
2400	0.77

Specific gravity	
4.91	

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.)	3.3	3.4	3.7	4.1	4.3	4.7	4.7	4.8	5.2	5.7	6.8	6.9	8.2	9.6	10.7
60 to 80 (ref.)	3.1	3.2	3.6	3.9	4.2	4.5	4.5	4.6	5.0	5.5	6.5	6.6	7.9	9.3	10.3
40 to 60	2.9	3.1	3.4	3.7	3.9	4.2	4.3	4.4	4.7	5.2	6.1	6.3	7.5	8.8	9.7
20 to 40	2.8	2.9	3.2	3.5	3.7	4.0	4.1	4.1	4.5	4.9	5.8	6.0	7.1	8.4	9.3
0 to 20	2.7	2.8	3.1	3.3	3.6	3.8	3.9	4.0	4.3	4.7	5.6	5.7	6.8	8.0	8.8
-20 to 0	2.6	2.7	3.0	3.2	3.5	3.7	3.8	3.9	4.2	4.6	5.4	5.5	6.5	7.7	8.5
-40 to -20	2.6	2.7	3.0	3.2	3.4	3.7	3.8	3.8	4.1	4.5	5.3	5.4	6.4	7.4	8.2
-60 to -40 (ref.)	2.7	2.8	3.1	3.3	3.5	3.8	3.8	3.9	4.2	4.5	5.3	5.4	6.3	7.3	8.0
-70 to -60 (ref.)	2.9	3.0	3.3	3.5	3.7	3.9	4.0	4.0	4.3	4.6	5.4	5.5	6.3	7.3	8.0

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	2.1	2.3	2.6	2.9	3.2	3.5	3.6	3.6	4.0	4.5	5.5	5.7	7.0	8.4	9.4
60 to 80	1.9	2.0	2.3	2.6	2.9	3.2	3.3	3.3	3.7	4.2	5.2	5.3	6.6	7.9	8.9
40 to 60	1.5	1.6	2.0	2.2	2.5	2.8	2.8	2.9	3.3	3.7	4.7	4.8	6.0	7.3	8.2
20 to 40	1.2	1.3	1.6	1.8	2.1	2.3	2.4	2.5	2.8	3.3	4.2	4.3	5.4	6.7	7.5
0 to 20	0.8	0.9	1.2	1.5	1.7	1.9	2.0	2.1	2.4	2.8	3.7	3.8	4.8	6.0	6.8
-20 to 0	0.5	0.6	0.8	1.1	1.3	1.5	1.6	1.7	2.0	2.4	3.2	3.3	4.3	5.4	6.1
-40 to -20	0.1	0.2	0.5	0.7	0.9	1.1	1.2	1.2	1.5	1.9	2.7	2.8	3.7	4.7	5.5
-60 to -40	-0.2	-0.2	0.1	0.3	0.5	0.7	0.8	0.8	1.1	1.4	2.1	2.2	3.1	4.1	4.8
-70 to -60	-0.5	-0.4	-0.2	0.0	0.2	0.4	0.5	0.5	0.8	1.1	1.8	1.9	2.7	3.6	4.3

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.11954525E-01
Q1	8.21989294E+01
P2	2.00210947E-02
Q2	4.96736613E-02
P3	4.34276646E-01
Q3	7.01617935E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	1.0	4.3
Frac. eq. (ref.)	2.6	8.2

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

-	-
2019-4-1	Transmittance
2017-4-1	1st edition