

J-SFH1

$n_d = 1.808090$

$n_e = 1.816440$

$v_d = 22.74$

$v_e = 22.55$

Glass code (d)	808227
Glass code (e)	816226

Spectral l.	Refractive idx
2.058	1.75156
1.970	1.75327
1.530	1.76173
1.129	1.77098
1.064	1.77295
t	1.77466
s	1.78187
A'	1.787287
r	1.792532
C	1.797989
C'	1.799554
He-Ne	1.801030
D	1.807785
d	1.808090
e	1.816440
F	1.833527
F'	1.835758
g	1.855872
h	1.876462
0.389	1.890157
i	-

Coef. disp. form. (pwr ser.)	
A0	3.11637039E+00
A1	-1.40103252E-02
A2	0.00000000E+00
A3	4.55295459E-02
A4	3.79129507E-03
A5	-5.76203793E-04
A6	1.53793977E-04
A7	-1.65780029E-05
A8	8.81480500E-07

Partial dispersion	
F-C	0.035538
F'-C'	0.036204
C-t	0.023326
C-A'	0.010702
d-C	0.010101
e-C	0.018451
g-d	0.047782
g-F	0.022345
h-g	0.020590
i-g	-
C'-t	0.024891
e-C'	0.016886
F'-e	0.019318
i-F'	-

Relative partial dispersion	
C-t/F-C	0.6564
C-A'/F-C	0.3011
d-C/F-C	0.2842
e-C/F-C	0.5192
g-d/F-C	1.3445
g-F/F-C	0.6288
h-g/F-C	0.5794
i-g/F-C	-
C'-t/F'-C'	0.6875
e-C'/F'-C'	0.4664
F'-e/F'-C'	0.5336
i-F'/F'-C'	-

Deviation of relative partial disp.	
ΔPdC	-0.0032
ΔPgF	0.0226

Internal CC (80%/5%)	
404/371	

Color Code (80%/5%)	
445/370	

CCI	
B	0.00
G	4.21
R	4.39

Thermal properties	
CTE(-30,70) [1E-7/°C]	91
CTE(100,300) [1E-7/°C]	113
Tg [°C]	581
At [°C]	619
Ht condct. [W/m·K]	0.862
Sp. heat [kJ/kg·K]	0.635
Ht diffus. [1E-6 m2/sec]	0.408

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	408 (4)
Abrasion hardness	341
Young's mod. [GPa]	83.0
Shear mod. [GPa]	33.0
Poisson's ratio	0.259
Stress optical coef. [1E-5 nm/cm/Pa]	3.31

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	0.00
360	0.00
370	0.04
380	0.25
390	0.55
400	0.75
420	0.908
440	0.952
460	0.968
480	0.978
500	0.983
550	0.992
600	0.996
650	0.996
700	0.998
800	0.996
900	0.994
1000	0.995
1200	0.996
1400	0.997
1600	0.989
1800	0.974
2000	0.966
2200	0.939
2400	0.908

Specific gravity	
3.31	

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.)	-3.9	-3.8	-3.6	-3.3	-2.9	-2.6	-2.5	-2.4	-1.8	-1.2	0.4	0.6	3.1	6.4	9.1	
60 to 80 (ref.)	-3.9	-3.9	-3.6	-3.3	-3.0	-2.7	-2.6	-2.5	-2.0	-1.3	0.2	0.4	2.8	6.0	8.6	
40 to 60	-4.0	-4.0	-3.7	-3.4	-3.1	-2.8	-2.7	-2.6	-2.1	-1.5	0.0	0.2	2.4	5.4	7.8	
20 to 40	-4.0	-4.0	-3.7	-3.5	-3.2	-2.9	-2.8	-2.7	-2.2	-1.6	-0.2	0.0	2.1	4.9	7.2	
0 to 20	-4.0	-4.0	-3.8	-3.5	-3.2	-2.9	-2.8	-2.7	-2.3	-1.7	-0.4	-0.2	1.8	4.4	6.5	
-20 to 0	-3.9	-3.9	-3.7	-3.5	-3.2	-2.9	-2.8	-2.7	-2.3	-1.8	-0.5	-0.3	1.6	4.0	5.9	
-40 to -20	-3.8	-3.8	-3.6	-3.3	-3.1	-2.8	-2.7	-2.6	-2.2	-1.7	-0.6	-0.4	1.4	3.7	5.4	
-60 to -40 (ref.)	-3.5	-3.5	-3.4	-3.1	-2.9	-2.6	-2.5	-2.5	-2.1	-1.6	-0.5	-0.3	1.4	3.5	5.0	
-70 to -60 (ref.)	-3.3	-3.3	-3.1	-2.9	-2.6	-2.4	-2.3	-2.2	-1.9	-1.4	-0.3	-0.2	1.4	3.4	4.8	

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	-5.0	-4.9	-4.7	-4.4	-4.0	-3.7	-3.6	-3.5	-3.0	-2.3	-0.8	-0.5	1.9	5.2	7.9	
60 to 80	-5.1	-5.1	-4.8	-4.5	-4.2	-3.9	-3.8	-3.7	-3.2	-2.6	-1.1	-0.8	1.5	4.7	7.3	
40 to 60	-5.3	-5.3	-5.1	-4.8	-4.5	-4.2	-4.1	-4.0	-3.5	-2.9	-1.5	-1.2	1.0	4.0	6.4	
20 to 40	-5.5	-5.5	-5.3	-5.0	-4.7	-4.4	-4.3	-4.2	-3.8	-3.2	-1.9	-1.7	0.5	3.2	5.5	
0 to 20	-5.7	-5.7	-5.5	-5.3	-5.0	-4.7	-4.6	-4.5	-4.1	-3.6	-2.3	-2.1	-0.1	2.5	4.6	
-20 to 0	-6.0	-5.9	-5.7	-5.5	-5.3	-5.0	-4.9	-4.8	-4.4	-3.9	-2.7	-2.5	-0.6	1.8	3.7	
-40 to -20	-6.2	-6.2	-6.0	-5.8	-5.5	-5.2	-5.2	-5.1	-4.7	-4.2	-3.1	-2.9	-1.1	1.1	2.8	
-60 to -40	-6.4	-6.4	-6.2	-6.0	-5.8	-5.5	-5.4	-5.4	-5.0	-4.5	-3.5	-3.3	-1.7	0.4	1.9	
-70 to -60	-6.5	-6.5	-6.4	-6.2	-6.0	-5.7	-5.6	-5.6	-5.2	-4.8	-3.8	-3.6	-2.1	-0.2	1.2	

Coef. disp. form. (frac. eq.) (ref.)	
P1	9.85730452E-02
Q1	6.72412004E+01
P2	3.04158799E-02
Q2	6.53413919E-02
P3	3.82916992E-01
Q3	9.40813164E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.9	4.3
Frac. eq. (ref.)	4.8	16.9

Prod. Freq. (A to D)	B
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Similar glass type			
OHARA	S-NPH1	HOYA	FD225
CDGM	H-ZF71	SCHOTT	-

2019-4-1	Transmittance, Prod. Freq
2017-4-1	Similar glass type
2016-4-1	Similar glass type