

# J-SFH2

$n_d = 1.860740$

$n_e = 1.869508$

$v_d = 23.08$

$v_e = 22.89$

Glass code (d)
861231
Glass code (e)
870229

Spectral l.	Refractive idx
2.058	1.80120
1.970	1.80300
1.530	1.81192
1.129	1.82167
1.064	1.82375
t	1.82555
s	1.83315
A'	1.838854
r	1.844377
C	1.850120
C'	1.851766
He-Ne	1.853318
D	1.860420
d	1.860740
e	1.869508
F	1.887417
F'	1.889752
g	1.910759
h	1.932175
0.389	1.946358
i	-

Coef. disp. form. (pwr ser.)	
A0	3.29659106E+00
A1	-1.51583913E-02
A2	0.00000000E+00
A3	4.96966192E-02
A4	3.87657158E-03
A5	-5.33127104E-04
A6	1.43134944E-04
A7	-1.50873439E-05
A8	8.02061962E-07

Partial dispersion	
F-C	0.037297
F'-C'	0.037986
C-t	0.024570
C-A'	0.011266
d-C	0.010620
e-C	0.019388
g-d	0.050019
g-F	0.023342
h-g	0.021416
i-g	-
C'-t	0.026216
e-C'	0.017742
F'-e	0.020244
i-F'	-

Relative partial dispersion	
C-t/F-C	0.6588
C-A'/F-C	0.3021
d-C/F-C	0.2847
e-C/F-C	0.5198
g-d/F-C	1.3411
g-F/F-C	0.6258
h-g/F-C	0.5742
i-g/F-C	-
C'-t/F'-C'	0.6901
e-C'/F'-C'	0.4671
F'-e/F'-C'	0.5329
i-F'/F'-C'	-

Deviation of relative partial disp.	
$\Delta PdC$	-0.0029
$\Delta PgF$	0.0202

Internal CC (80%/5%)	
403/367	
Color Code (70%/5%)	
415/370	
CCI	
B	0.00
G	4.84
R	5.24

Thermal properties	
CTE(-30,70) [1E-7/°C]	84
CTE(100,300) [1E-7/°C]	98
Tg [°C]	589
At [°C]	630
StP [°C]	546
AP [°C]	580
SP [°C]	696
Ht condct. [W/m·K]	0.813
Sp. heat [kJ/kg·K]	0.572
Ht diffus. [1E-6 m2/sec]	0.372

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	441 (4)
Abrasion hardness	309
Young's mod. [GPa]	88.8
Shear mod. [GPa]	35.0
Poisson's ratio	0.268
Stress optical coef. [1E-5 nm/cm/Pa]	3.04

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	-
290	-
300	-
310	-
320	-
330	-
340	-
350	-
360	-
370	0.10
380	0.36
390	0.63
400	0.77
420	0.88
440	0.916
460	0.938
480	0.954
500	0.965
550	0.985
600	0.992
650	0.993
700	0.995
800	0.996
900	0.997
1000	0.997
1200	0.999
1400	0.998
1600	0.995
1800	0.986
2000	0.977
2200	0.942
2400	0.906

Specific gravity	
3.82	

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.)	-2.9	-2.8	-2.5	-2.2	-1.8	-1.5	-1.4	-1.2	-0.7	0.0	1.7	2.0	4.5	7.9	10.7	
60 to 80 (ref.)	-3.0	-2.9	-2.6	-2.3	-2.0	-1.6	-1.5	-1.4	-0.9	-0.2	1.4	1.7	4.1	7.4	10.0	
40 to 60	-3.1	-3.1	-2.8	-2.5	-2.2	-1.8	-1.7	-1.6	-1.1	-0.5	1.1	1.3	3.6	6.7	9.2	
20 to 40	-3.2	-3.2	-2.9	-2.6	-2.3	-2.0	-1.9	-1.8	-1.3	-0.7	0.8	1.0	3.2	6.0	8.3	
0 to 20	-3.3	-3.2	-3.0	-2.7	-2.4	-2.1	-2.0	-1.9	-1.5	-0.9	0.5	0.7	2.8	5.4	7.5	
-20 to 0	-3.3	-3.2	-3.0	-2.7	-2.5	-2.2	-2.1	-2.0	-1.6	-1.0	0.3	0.5	2.4	4.8	6.8	
-40 to -20	-3.2	-3.2	-2.9	-2.7	-2.5	-2.2	-2.1	-2.0	-1.6	-1.1	0.1	0.3	2.1	4.4	6.1	
-60 to -40 (ref.)	-3.0	-3.0	-2.8	-2.6	-2.3	-2.1	-2.0	-1.9	-1.5	-1.0	0.1	0.3	1.9	4.0	5.6	
-70 to -60 (ref.)	-2.8	-2.8	-2.6	-2.4	-2.1	-1.9	-1.8	-1.7	-1.4	-0.9	0.2	0.3	1.9	3.8	5.3	

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	-4.0	-3.9	-3.6	-3.3	-3.0	-2.6	-2.5	-2.4	-1.9	-1.1	0.5	0.8	3.3	6.7	9.5	
60 to 80	-4.2	-4.2	-3.8	-3.6	-3.2	-2.9	-2.8	-2.7	-2.2	-1.5	0.2	0.4	2.8	6.0	8.7	
40 to 60	-4.5	-4.4	-4.2	-3.9	-3.6	-3.2	-3.1	-3.0	-2.5	-1.9	-0.4	-0.1	2.2	5.2	7.6	
20 to 40	-4.8	-4.7	-4.5	-4.2	-3.9	-3.6	-3.5	-3.4	-2.9	-2.3	-0.9	-0.7	1.5	4.3	6.6	
0 to 20	-5.1	-5.0	-4.8	-4.5	-4.3	-4.0	-3.9	-3.8	-3.3	-2.8	-1.4	-1.2	0.8	3.4	5.5	
-20 to 0	-5.4	-5.3	-5.1	-4.9	-4.6	-4.3	-4.2	-4.2	-3.7	-3.2	-1.9	-1.7	0.1	2.6	4.5	
-40 to -20	-5.7	-5.6	-5.4	-5.2	-4.9	-4.7	-4.6	-4.5	-4.1	-3.6	-2.4	-2.3	-0.5	1.7	3.5	
-60 to -40	-6.0	-5.9	-5.7	-5.5	-5.3	-5.0	-5.0	-4.9	-4.5	-4.1	-3.0	-2.8	-1.2	0.8	2.4	
-70 to -60	-6.2	-6.1	-5.9	-5.7	-5.5	-5.3	-5.2	-5.2	-4.8	-4.4	-3.4	-3.2	-1.7	0.2	1.6	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.10507518E-01
Q1	7.39541338E+01
P2	3.18957625E-02
Q2	6.34615914E-02
P3	4.01415757E-01
Q3	9.05242609E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	1.1	6.7
Frac. eq. (ref.)	4.3	12.7

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

2022-7-1	StP, AP, SP
2019-4-1	Transmittance
2018-4-1	Prod. Freq.