

J-SFH4

 $n_d = 1.663820$
 $n_e = 1.669520$
 $v_d = 27.35$
 $v_e = 27.07$

Glass code (d)
664274
Glass code (e)
670271

Spectral l.	Refractive idx
2.058	1.62274
1.970	1.62418
1.530	1.63103
1.129	1.63803
1.064	1.63947
t	1.64070
s	1.64580
A'	1.649567
r	1.653178
C	1.656918
C'	1.657989
He-Ne	1.658998
D	1.663612
d	1.663820
e	1.669520
F	1.681192
F'	1.682719
g	1.696531
h	1.710834
0.389	1.720477
i	-

Coef. disp. form. (pwr ser.)	
A0	2.66988350E+00
A1	-9.72056100E-03
A2	-1.78592986E-04
A3	3.30802051E-02
A4	-4.66984185E-04
A5	5.77270500E-04
A6	-7.46804377E-05
A7	5.46919156E-06
A8	0.00000000E+00

Partial dispersion	
F-C	0.024274
F'-C'	0.024730
C-t	0.016216
C-A'	0.007351
d-C	0.006902
e-C	0.012602
g-d	0.032711
g-F	0.015339
h-g	0.014303
i-g	-
C'-t	0.017287
e-C'	0.011531
F'-e	0.013199
i-F'	-

Relative partial dispersion	
C-t/F-C	0.6680
C-A'/F-C	0.3028
d-C/F-C	0.2843
e-C/F-C	0.5192
g-d/F-C	1.3476
g-F/F-C	0.6319
h-g/F-C	0.5892
i-g/F-C	-
C'-t/F'-C'	0.6990
e-C'/F'-C'	0.4663
F'-e/F'-C'	0.5337
i-F'/F'-C'	-

Deviation of relative partial disp.	
ΔPdC	-0.0052
ΔPgF	0.0334

Internal CC (80%/5%)	
405/375	
Color Code (80%/5%)	
425/375	
CCI	
B	0.00
G	4.20
R	4.46

Thermal properties	
CTE(-30,70) [1E-7/°C]	111
CTE(100,300) [1E-7/°C]	143
Tg [°C]	476
At [°C]	520
StP [°C]	439
AP [°C]	470
SP [°C]	575
Ht condct. [W/m·K]	0.807
Sp. heat [kJ/kg·K]	0.745
Ht diffus. [1E-6 m2/sec]	0.375

Chemical properties [class]	
Acid res. (surface)	1
Alkaline detergent res.	1
Climate resistance	1
Water res. (powder)	2
Acid res. (powder)	1

Mechanical properties	
Knoop hardness	343 (3)
Abrasion hardness	509
Young's mod. [GPa]	71.6
Shear mod. [GPa]	28.3
Poisson's ratio	0.266
Stress optical coef. [1E-5 nm/cm/Pa]	2.55

Internal trans. (10mm)	
λ [nm]	τ
280	-
290	-
300	-
310	-
320	-
330	-
340	-
350	-
360	-
370	0.01
380	0.16
390	0.48
400	0.72
420	0.905
440	0.953
460	0.968
480	0.974
500	0.978
550	0.984
600	0.988
650	0.991
700	0.994
800	0.996
900	0.998
1000	0.999
1200	0.999
1400	0.999
1600	0.992
1800	0.957
2000	0.908
2200	0.85
2400	0.79

Specific gravity	
2.89	

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.)	-4.6	-4.6	-4.4	-4.0	-3.7	-3.4	-3.3	-3.2	-2.7	-2.1	-0.7	-0.4	1.9	5.0	7.6	
60 to 80 (ref.)	-4.6	-4.5	-4.3	-4.0	-3.7	-3.3	-3.2	-3.2	-2.7	-2.1	-0.7	-0.5	1.7	4.7	7.2	
40 to 60	-4.5	-4.4	-4.2	-3.9	-3.6	-3.3	-3.2	-3.1	-2.7	-2.1	-0.8	-0.6	1.4	4.3	6.6	
20 to 40	-4.3	-4.3	-4.1	-3.8	-3.5	-3.2	-3.1	-3.0	-2.6	-2.1	-0.9	-0.7	1.2	3.9	6.1	
0 to 20	-4.2	-4.1	-3.9	-3.7	-3.4	-3.1	-3.0	-2.9	-2.6	-2.1	-0.9	-0.8	1.1	3.6	5.6	
-20 to 0	-3.9	-3.9	-3.7	-3.5	-3.2	-2.9	-2.9	-2.8	-2.4	-2.0	-0.9	-0.7	1.0	3.3	5.1	
-40 to -20	-3.6	-3.6	-3.4	-3.2	-3.0	-2.7	-2.6	-2.6	-2.2	-1.8	-0.8	-0.7	0.9	3.1	4.8	
-60 to -40 (ref.)	-3.3	-3.3	-3.1	-2.9	-2.6	-2.4	-2.3	-2.2	-1.9	-1.5	-0.6	-0.5	1.0	3.0	4.5	
-70 to -60 (ref.)	-2.9	-2.9	-2.7	-2.5	-2.3	-2.1	-2.0	-1.9	-1.6	-1.2	-0.4	-0.2	1.1	3.0	4.4	

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	-5.7	-5.6	-5.3	-5.1	-4.7	-4.4	-4.3	-4.2	-3.7	-3.1	-1.7	-1.5	0.8	3.9	6.6	
60 to 80	-5.7	-5.7	-5.4	-5.1	-4.8	-4.5	-4.4	-4.3	-3.8	-3.3	-1.9	-1.7	0.5	3.5	6.0	
40 to 60	-5.7	-5.7	-5.4	-5.2	-4.9	-4.6	-4.5	-4.4	-4.0	-3.4	-2.1	-1.9	0.1	3.0	5.3	
20 to 40	-5.7	-5.7	-5.5	-5.2	-5.0	-4.7	-4.6	-4.5	-4.1	-3.6	-2.4	-2.2	-0.3	2.4	4.6	
0 to 20	-5.8	-5.8	-5.5	-5.3	-5.0	-4.8	-4.7	-4.6	-4.2	-3.7	-2.6	-2.5	-0.6	1.8	3.8	
-20 to 0	-5.8	-5.8	-5.6	-5.4	-5.1	-4.9	-4.8	-4.7	-4.4	-3.9	-2.9	-2.7	-1.0	1.3	3.1	
-40 to -20	-5.8	-5.8	-5.7	-5.4	-5.2	-5.0	-4.9	-4.8	-4.5	-4.1	-3.1	-3.0	-1.4	0.7	2.4	
-60 to -40	-5.9	-5.9	-5.7	-5.5	-5.3	-5.0	-5.0	-4.9	-4.6	-4.2	-3.3	-3.2	-1.8	0.2	1.7	
-70 to -60	-5.9	-5.9	-5.7	-5.6	-5.3	-5.1	-5.1	-5.0	-4.7	-4.4	-3.5	-3.4	-2.1	-0.3	1.1	

Coef. disp. form. (frac. eq.) (ref.)	
P1	9.81224168E-02
Q1	6.98916297E+01
P2	1.98027993E-02
Q2	7.20938068E-02
P3	3.38032350E-01
Q3	8.24394223E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	1.5	4.6
Frac. eq. (ref.)	5.0	8.2

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

2022-7-1	StP, AP, SP
2021-4-1	Refractive idx, Partial dispersion, Relative partial dispersion
2020-4-1	1st edition