

J-SFH5

 $n_d = 1.755750$
 $n_e = 1.762936$
 $v_d = 24.71$
 $v_e = 24.49$

Glass code (d)
756247
Glass code (e)
763245

Spectral l.	Refractive idx
2.058	1.70465
1.970	1.70639
1.530	1.71472
1.129	1.72335
1.064	1.72513
t	1.72667
s	1.73306
A'	1.737788
r	1.742335
C	1.747048
C'	1.748398
He-Ne	1.749669
D	1.755488
d	1.755750
e	1.762936
F	1.777633
F'	1.779553
g	1.796874
h	1.814702
0.389	1.826650
i	-

Coef. disp. form. (pwr ser.)	
A0	2.95136928E+00
A1	-1.22217040E-02
A2	-2.29797089E-04
A3	4.39763055E-02
A4	-5.94321969E-04
A5	7.66493369E-04
A6	-9.82633510E-05
A7	7.00260276E-06
A8	0.00000000E+00

Partial dispersion	
F-C	0.030585
F'-C'	0.031155
C-t	0.020377
C-A'	0.009260
d-C	0.008702
e-C	0.015888
g-d	0.041124
g-F	0.019241
h-g	0.017828
i-g	-
C'-t	0.021727
e-C'	0.014538
F'-e	0.016617
i-F'	-

Relative partial dispersion	
C-t/F-C	0.6662
C-A'/F-C	0.3028
d-C/F-C	0.2845
e-C/F-C	0.5195
g-d/F-C	1.3446
g-F/F-C	0.6291
h-g/F-C	0.5829
i-g/F-C	-
C'-t/F'-C'	0.6974
e-C'/F'-C'	0.4666
F'-e/F'-C'	0.5334
i-F'/F'-C'	-

Deviation of relative partial disp.	
ΔPdC	-0.0038
ΔPgF	0.0262

Internal CC (80%/5%)	
404/377	
Color Code (80%/5%)	
445/375	
CCI	
B	0.00
G	4.33
R	4.73

Thermal properties	
CTE(-30,70) [1E-7/°C]	84
CTE(100,300) [1E-7/°C]	107
Tg [°C]	540
At [°C]	595
StP [°C]	507
AP [°C]	542
SP [°C]	656
Ht condct. [W/m·K]	0.836
Sp. heat [kJ/kg·K]	0.669
Ht diffus. [1E-6 m2/sec]	0.393

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	391 (4)
Abrasion hardness	346
Young's mod. [GPa]	83.2
Shear mod. [GPa]	33.1
Poisson's ratio	0.256
Stress optical coef. [1E-5 nm/cm/Pa]	3.07

Internal trans. (10mm)		
λ [nm]	τ	
280	-	
290	-	
300	-	
310	-	
320	-	
330	-	
340	-	
350	-	
360	-	
370	-	
380	0.12	
390	0.47	
400	0.74	
420	0.905	
440	0.942	
460	0.957	
480	0.965	
500	0.971	
550	0.983	
600	0.988	
650	0.992	
700	0.993	
800	0.995	
900	0.997	
1000	0.998	
1200	0.999	
1400	0.993	
1600	0.987	
1800	0.965	
2000	0.934	
2200	0.85	
2400	0.77	

Specific gravity	
3.19	

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.)	-1.9	-1.9	-1.6	-1.2	-0.9	-0.5	-0.4	-0.3	0.2	0.9	2.5	2.7	5.1	8.4	11.2	
60 to 80 (ref.)	-2.1	-2.0	-1.7	-1.4	-1.1	-0.7	-0.6	-0.5	0.0	0.7	2.2	2.4	4.7	7.8	10.5	
40 to 60	-2.2	-2.2	-1.9	-1.6	-1.3	-0.9	-0.8	-0.7	-0.2	0.4	1.8	2.0	4.1	7.1	9.6	
20 to 40	-2.3	-2.3	-2.0	-1.7	-1.5	-1.1	-1.0	-0.9	-0.5	0.1	1.4	1.6	3.6	6.4	8.8	
0 to 20	-2.4	-2.4	-2.1	-1.9	-1.6	-1.3	-1.2	-1.1	-0.7	-0.1	1.1	1.3	3.2	5.8	7.9	
-20 to 0	-2.5	-2.4	-2.2	-1.9	-1.7	-1.4	-1.3	-1.2	-0.8	-0.3	0.9	1.0	2.8	5.2	7.2	
-40 to -20	-2.4	-2.4	-2.2	-1.9	-1.7	-1.4	-1.3	-1.3	-0.9	-0.4	0.7	0.8	2.5	4.7	6.5	
-60 to -40 (ref.)	-2.3	-2.3	-2.1	-1.8	-1.6	-1.4	-1.3	-1.2	-0.9	-0.4	0.6	0.7	2.2	4.3	5.9	
-70 to -60 (ref.)	-2.1	-2.1	-1.9	-1.7	-1.5	-1.2	-1.2	-1.1	-0.7	-0.3	0.6	0.7	2.1	4.0	5.6	

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	-3.0	-2.9	-2.6	-2.3	-2.0	-1.6	-1.5	-1.4	-0.9	-0.2	1.4	1.6	4.0	7.2	10.0	
60 to 80	-3.2	-3.2	-2.9	-2.6	-2.2	-1.9	-1.8	-1.7	-1.2	-0.5	0.9	1.2	3.4	6.6	9.2	
40 to 60	-3.5	-3.5	-3.2	-2.9	-2.6	-2.3	-2.2	-2.1	-1.6	-1.0	0.4	0.6	2.8	5.7	8.2	
20 to 40	-3.8	-3.8	-3.5	-3.3	-3.0	-2.6	-2.6	-2.5	-2.0	-1.4	-0.1	0.1	2.1	4.8	7.1	
0 to 20	-4.1	-4.1	-3.8	-3.6	-3.3	-3.0	-2.9	-2.9	-2.4	-1.9	-0.7	-0.5	1.4	3.9	6.1	
-20 to 0	-4.4	-4.4	-4.2	-3.9	-3.7	-3.4	-3.3	-3.2	-2.9	-2.4	-1.2	-1.1	0.7	3.0	5.0	
-40 to -20	-4.7	-4.7	-4.5	-4.3	-4.1	-3.8	-3.7	-3.6	-3.3	-2.8	-1.8	-1.6	0.0	2.2	4.0	
-60 to -40	-5.0	-5.0	-4.8	-4.6	-4.4	-4.2	-4.1	-4.0	-3.7	-3.3	-2.3	-2.2	-0.7	1.3	2.9	
-70 to -60	-5.3	-5.3	-5.1	-4.9	-4.7	-4.5	-4.4	-4.3	-4.0	-3.6	-2.7	-2.6	-1.2	0.6	2.1	

Coef. disp. form. (frac. eq.) (ref.)	
P1	9.75673240E-02
Q1	6.24777153E+01
P2	2.29130404E-02
Q2	7.02967186E-02
P3	3.71469828E-01
Q3	9.10137167E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	2.2	8.6
Frac. eq. (ref.)	8.2	15.1

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