

J-SF03HS

$n_d = 1.846660$

$n_e = 1.855032$

$v_d = 23.80$

$v_e = 23.61$

Glass code (d)
847238
Glass code (e)
855236

Spectral l.	Refractive idx
2.058	1.79055
1.970	1.79217
1.530	1.80027
1.129	1.80936
1.064	1.81132
t	1.81303
s	1.82027
A'	1.825725
r	1.831009
C	1.836505
C'	1.838080
He-Ne	1.839564
D	1.846354
d	1.846660
e	1.855032
F	1.872084
F'	1.874302
g	1.894197
h	1.914364
0.389	1.927659
i	-

Coef. disp. form. (pwr ser.)	
A0	3.25089291E+00
A1	-1.33244110E-02
A2	0.00000000E+00
A3	4.84040988E-02
A4	3.26383680E-03
A5	-4.01470701E-04
A6	1.16583198E-04
A7	-1.27242455E-05
A8	6.96171808E-07

Partial dispersion	
F-C	0.035579
F'-C'	0.036222
C-t	0.023473
C-A'	0.010780
d-C	0.010155
e-C	0.018527
g-d	0.047537
g-F	0.022113
h-g	0.020167
i-g	-
C'-t	0.025048
e-C'	0.016952
F'-e	0.019270
i-F'	-

Relative partial dispersion	
C-t/F-C	0.6597
C-A'/F-C	0.3030
d-C/F-C	0.2854
e-C/F-C	0.5207
g-d/F-C	1.3361
g-F/F-C	0.6215
h-g/F-C	0.5668
i-g/F-C	-
C'-t/F'-C'	0.6915
e-C'/F'-C'	0.4680
F'-e/F'-C'	0.5320
i-F'/F'-C'	-

Deviation of relative partial disp.	
ΔPdC	-0.0025
ΔPgF	0.0171

Internal CC (80%/5%)	
398/367	
Color Code (70%/5%)	
405/370	
CCI	
B	0.00
G	3.22
R	3.39

Thermal properties	
CTE(-30,70) [1E-7/°C]	81
CTE(100,300) [1E-7/°C]	102
Tg [°C]	615
At [°C]	648
StP [°C]	-
AP [°C]	-
SP [°C]	-
Ht condct. [W/m·K]	0.970
Sp. heat [kJ/kg·K]	0.590
Ht diffus. [1E-6 m2/sec]	0.466

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	492 (5)
Abrasion hardness	179
Young's mod. [GPa]	94.4
Shear mod. [GPa]	37.3
Poisson's ratio	0.266
Stress optical coef. [1E-5 nm/cm/Pa]	2.92

Internal trans. (10mm)		
λ [nm]	τ	
280	-	
290	-	
300	-	
310	-	
320	-	
330	-	
340	-	
350	-	
360	-	
370	0.11	
380	0.43	
390	0.70	
400	0.83	
420	0.925	
440	0.956	
460	0.970	
480	0.977	
500	0.982	
550	0.992	
600	0.995	
650	0.995	
700	0.997	
800	0.998	
900	0.999	
1000	0.998	
1200	0.996	
1400	0.993	
1600	0.990	
1800	0.986	
2000	0.976	
2200	0.953	
2400	0.914	

Specific gravity	
3.53	

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.)	-0.4	-0.3	0.0	0.4	0.7	1.1	1.2	1.3	1.9	2.7	4.4	4.6	7.1	10.2	12.7	
60 to 80 (ref.)	-0.6	-0.4	0.0	0.2	0.5	0.9	1.0	1.1	1.7	2.4	4.1	4.3	6.7	9.6	12.0	
40 to 60	-0.7	-0.6	-0.2	0.0	0.3	0.7	0.8	0.9	1.4	2.1	3.7	3.9	6.1	8.9	11.2	
20 to 40	-0.9	-0.7	-0.4	-0.1	0.2	0.5	0.6	0.7	1.2	1.8	3.3	3.5	5.6	8.3	10.3	
0 to 20	-1.0	-0.8	-0.5	-0.3	0.0	0.3	0.4	0.5	1.0	1.6	3.0	3.2	5.2	7.6	9.6	
-20 to 0	-1.0	-0.9	-0.6	-0.3	-0.1	0.2	0.3	0.4	0.9	1.4	2.8	3.0	4.8	7.1	8.9	
-40 to -20	-0.9	-0.8	-0.5	-0.3	-0.1	0.2	0.3	0.4	0.8	1.3	2.6	2.8	4.5	6.6	8.2	
-60 to -40 (ref.)	-0.8	-0.7	-0.4	-0.2	0.0	0.3	0.4	0.4	0.8	1.4	2.5	2.7	4.3	6.2	7.7	
-70 to -60 (ref.)	-0.6	-0.5	-0.2	0.0	0.2	0.4	0.5	0.6	1.0	1.4	2.6	2.7	4.2	6.0	7.4	

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	-1.6	-1.4	-1.0	-0.7	-0.4	0.0	0.1	0.2	0.8	1.5	3.2	3.4	5.9	9.0	11.4	
60 to 80	-1.8	-1.7	-1.3	-1.0	-0.7	-0.3	-0.2	-0.1	0.4	1.2	2.8	3.0	5.4	8.3	10.7	
40 to 60	-2.1	-2.0	-1.6	-1.4	-1.1	-0.7	-0.6	-0.5	0.0	0.7	2.2	2.5	4.7	7.4	9.7	
20 to 40	-2.4	-2.3	-2.0	-1.7	-1.4	-1.1	-1.0	-0.9	-0.4	0.2	1.7	1.9	4.0	6.6	8.6	
0 to 20	-2.7	-2.6	-2.3	-2.1	-1.8	-1.5	-1.4	-1.3	-0.9	-0.2	1.1	1.3	3.3	5.7	7.6	
-20 to 0	-3.1	-2.9	-2.7	-2.4	-2.2	-1.9	-1.8	-1.7	-1.3	-0.7	0.6	0.8	2.6	4.8	6.6	
-40 to -20	-3.4	-3.3	-3.0	-2.8	-2.6	-2.3	-2.2	-2.1	-1.7	-1.2	0.0	0.2	1.9	3.9	5.6	
-60 to -40	-3.7	-3.6	-3.3	-3.1	-2.9	-2.7	-2.6	-2.5	-2.1	-1.7	-0.5	-0.4	1.2	3.1	4.5	
-70 to -60	-3.9	-3.8	-3.6	-3.4	-3.2	-3.0	-2.9	-2.8	-2.5	-2.0	-0.9	-0.8	0.7	2.4	3.8	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.11923941E-01
Q1	8.28410074E+01
P2	3.04841319E-02
Q2	6.23699294E-02
P3	3.97973273E-01
Q3	9.10166610E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.9	6.0
Frac. eq. (ref.)	3.4	11.1

Prod. Freq. (A to D)	A
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Similar glass type			
OHARA	S-TIH53W	HOYA	FDS90-SG
CDGM	H-ZF52GT	SCHOTT	N-SF57HT

2019-4-1	Transmittance
2018-4-1	Similar glass type
2017-4-1	1st edition