

J-SF1

 $n_d = 1.717360$
 $n_e = 1.723086$
 $v_d = 29.57$
 $v_e = 29.34$

Glass code (d)
717296
Glass code (e)
723293

Spectral l.	Refractive idx
2.058	1.67538
1.970	1.67679
1.530	1.68368
1.129	1.69085
1.064	1.69233
t	1.69361
s	1.69888
A'	1.702770
r	1.706496
C	1.710337
C'	1.711433
He-Ne	1.712463
D	1.717150
d	1.717360
e	1.723086
F	1.734595
F'	1.736078
g	1.749237
h	1.762313
0.389	1.770782
i	-

Partial dispersion	
F-C	0.024258
F'-C'	0.024645
C-t	0.016731
C-A'	0.007567
d-C	0.007023
e-C	0.012749
g-d	0.031877
g-F	0.014642
h-g	0.013076
i-g	-
C'-t	0.017827
e-C'	0.011653
F'-e	0.012992
i-F'	-

Relative partial dispersion	
C-t/F-C	0.6897
C-A'/F-C	0.3119
d-C/F-C	0.2895
e-C/F-C	0.5256
g-d/F-C	1.3141
g-F/F-C	0.6036
h-g/F-C	0.5390
i-g/F-C	-
C'-t/F'-C'	0.7234
e-C'/F'-C'	0.4728
F'-e/F'-C'	0.5272
i-F'/F'-C'	-

Deviation of relative partial disp.	
ΔPdC	-0.0010
ΔPgF	0.0089

Internal CC (80%/5%)	
393/360	
Color Code (80%/5%)	
415/360	
CCI	
B	0.00
G	2.59
R	2.65

Thermal properties	
CTE(-30,70) [1E-7/°C]	93
CTE(100,300) [1E-7/°C]	109
Tg [°C]	587
At [°C]	620
StP [°C]	536
AP [°C]	569
SP [°C]	689
Ht condct. [W/m·K]	1.098
Sp. heat [kJ/kg·K]	0.720
Ht diffus. [1E-6 m2/sec]	0.493

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	496 (5)
Abrasion hardness	194
Young's mod. [GPa]	87.5
Shear mod. [GPa]	34.9
Poisson's ratio	0.255
Stress optical coef. [1E-5 nm/cm/Pa]	2.78

Internal trans. (10mm)	
λ [nm]	τ
280	-
290	-
300	-
310	-
320	-
330	-
340	-
350	-
360	0.05
370	0.26
380	0.56
390	0.77
400	0.87
420	0.940
440	0.965
460	0.976
480	0.983
500	0.988
550	0.995
600	0.996
650	0.996
700	0.997
800	0.995
900	0.993
1000	0.994
1200	0.995
1400	0.994
1600	0.987
1800	0.966
2000	0.950
2200	0.905
2400	0.86

Specific gravity	
3.07	

Coef. disp. form. (pwr ser.)	
A0	2.84777930E+00
A1	-1.14171302E-02
A2	0.00000000E+00
A3	3.10426999E-02
A4	2.54456183E-03
A5	-4.60296278E-04
A6	1.02222014E-04
A7	-1.01220546E-05
A8	4.62539051E-07

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	0.6	0.8	1.1	1.3	1.5	1.6	1.7	2.1	2.6	3.7	3.9	5.4	7.1	8.5	
60 to 80 (ref.)	0.3	0.5	0.8	0.9	1.1	1.4	1.5	1.5	1.9	2.4	3.5	3.7	5.2	6.8	8.1	
40 to 60	0.2	0.4	0.6	0.8	1.0	1.2	1.3	1.4	1.8	2.2	3.3	3.5	4.9	6.5	7.7	
20 to 40	0.2	0.3	0.6	0.7	0.9	1.1	1.2	1.3	1.6	2.1	3.1	3.3	4.6	6.1	7.3	
0 to 20	0.1	0.3	0.5	0.7	0.8	1.1	1.1	1.2	1.5	2.0	3.0	3.1	4.4	5.8	6.9	
-20 to 0	0.2	0.3	0.5	0.7	0.8	1.0	1.1	1.2	1.5	1.9	2.9	3.0	4.2	5.6	6.6	
-40 to -20	0.3	0.4	0.6	0.7	0.9	1.1	1.1	1.2	1.5	1.9	2.8	2.9	4.1	5.4	6.4	
-60 to -40 (ref.)	0.4	0.5	0.8	0.9	1.0	1.2	1.3	1.3	1.6	2.0	2.9	3.0	4.1	5.3	6.3	
-70 to -60 (ref.)	0.7	0.8	1.0	1.1	1.2	1.4	1.5	1.5	1.8	2.2	3.0	3.1	4.2	5.4	6.3	

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	-0.6	-0.5	-0.2	0.0	0.2	0.5	0.5	0.6	1.0	1.5	2.6	2.8	4.3	6.0	7.3	
60 to 80	-0.8	-0.7	-0.4	-0.2	0.0	0.2	0.3	0.4	0.8	1.2	2.4	2.5	3.9	5.6	6.9	
40 to 60	-1.0	-0.9	-0.7	-0.5	-0.3	-0.1	0.0	0.1	0.4	0.9	2.0	2.1	3.5	5.1	6.3	
20 to 40	-1.3	-1.2	-0.9	-0.8	-0.6	-0.4	-0.3	-0.2	0.1	0.6	1.6	1.7	3.0	4.6	5.7	
0 to 20	-1.5	-1.4	-1.2	-1.0	-0.9	-0.6	-0.6	-0.5	-0.2	0.2	1.2	1.3	2.6	4.0	5.1	
-20 to 0	-1.8	-1.7	-1.4	-1.3	-1.1	-0.9	-0.9	-0.8	-0.5	-0.1	0.8	1.0	2.1	3.5	4.5	
-40 to -20	-2.0	-1.9	-1.7	-1.6	-1.4	-1.2	-1.2	-1.1	-0.8	-0.4	0.4	0.6	1.7	3.0	3.9	
-60 to -40	-2.3	-2.2	-2.0	-1.8	-1.7	-1.5	-1.5	-1.4	-1.1	-0.8	0.1	0.2	1.2	2.4	3.4	
-70 to -60	-2.5	-2.3	-2.2	-2.0	-1.9	-1.7	-1.7	-1.6	-1.4	-1.0	-0.2	-0.1	0.9	2.0	2.9	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.09129972E-01
Q1	8.10331506E+01
P2	2.10593358E-02
Q2	6.04288183E-02
P3	3.59828783E-01
Q3	8.39419828E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.9	4.1
Frac. eq. (ref.)	1.8	8.6

Prod. Freq. (A to D)	B
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Similar glass type			
OHARA	S-TIH1	HOYA	E-FD1, E-FD1L
CDGM	H-ZF3	SCHOTT	N-SF1

2022-7-1	StP, AP, SP
2020-4-1	Similar glass type
2019-4-1	Transmittance