

J-SF11

$$n_d = 1.784720$$

$$n_e = 1.791929$$

$$v_d = 25.64$$

$$v_e = 25.43$$

Glass code (d)
785256
Glass code (e)
792254

Spectral l.	Refractive idx
2.058	1.73456
1.970	1.73612
1.530	1.74381
1.129	1.75213
1.064	1.75389
t	1.75541
s	1.76180
A'	1.766569
r	1.771171
C	1.775941
C'	1.777306
He-Ne	1.778590
D	1.784456
d	1.784720
e	1.791929
F	1.806548
F'	1.808444
g	1.825394
h	1.842474
0.389	1.853672
i	—

Coef. disp. form. (pwr ser.)	
A0	3.05304325E+00
A1	-1.27339910E-02
A2	0.00000000E+00
A3	3.99774262E-02
A4	3.16619134E-03
A5	-5.02824259E-04
A6	1.22491876E-04
A7	-1.25325941E-05
A8	6.19354223E-07

Partial dispersion	
F-C	0.030607
F'-C'	0.031138
C-t	0.020531
C-A'	0.009372
d-C	0.008779
e-C	0.015988
g-d	0.040674
g-F	0.018846
h-g	0.017080
i-g	—
C'-t	0.021896
e-C'	0.014623
F'-e	0.016515
i-F'	—

Relative partial dispersion	
C-t/F-C	0.6708
C-A'/F-C	0.3062
d-C/F-C	0.2868
e-C/F-C	0.5224
g-d/F-C	1.3289
g-F/F-C	0.6157
h-g/F-C	0.5580
i-g/F-C	—
C'-t/F'-C'	0.7032
e-C'/F'-C'	0.4696
F'-e/F'-C'	0.5304
i-F'/F'-C'	—

Deviation of relative partial disp.	
ΔPdC	-0.0019
ΔPgF	0.0144

Internal CC (80%/5%)	
397/364	
Color Code (80%/5%)	
430/365	
CCI	
B	0.00
G	3.12
R	3.25

Thermal properties	
CTE(-30,70) [1E-7/°C]	86
CTE(100,300) [1E-7/°C]	100
Tg [°C]	605
At [°C]	643
StP [°C]	557
AP [°C]	588
SP [°C]	704
Ht condct. [W/m·K]	1.060
Sp. heat [kJ/kg·K]	0.697
Ht diffus. [1E-6 m2/sec]	0.468

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	501 (5)
Abrasion hardness	130
Young's mod. [GPa]	91.9
Shear mod. [GPa]	36.5
Poisson's ratio	0.260
Stress optical coef. [1E-5 nm/cm/Pa]	2.75

Internal trans. (10mm)	
λ [nm]	τ
280	—
290	—
300	—
310	—
320	—
330	—
340	—
350	—
360	0.02
370	0.15
380	0.44
390	0.70
400	0.83
420	0.929
440	0.958
460	0.970
480	0.978
500	0.984
550	0.992
600	0.995
650	0.994
700	0.996
800	0.997
900	0.998
1000	0.998
1200	0.999
1400	0.999
1600	0.990
1800	0.973
2000	0.964
2200	0.931
2400	0.89

Specific gravity	
3.25	

Relative Δn/ΔT [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	0.5	0.8	1.1	1.4	1.8	1.9	2.0	2.5	3.2	4.6	4.9	6.9	9.5	11.6	
60 to 80 (ref.)	0.2	0.4	0.7	1.0	1.3	1.6	1.7	1.8	2.3	2.9	4.4	4.6	6.6	9.0	11.0	
40 to 60	0.1	0.2	0.5	0.8	1.1	1.4	1.5	1.6	2.0	2.6	4.0	4.2	6.1	8.4	10.3	
20 to 40	0.0	0.1	0.4	0.6	0.9	1.2	1.3	1.4	1.8	2.4	3.7	3.8	5.6	7.8	9.6	
0 to 20	-0.1	0.0	0.3	0.5	0.7	1.0	1.1	1.2	1.6	2.2	3.4	3.5	5.2	7.3	8.9	
-20 to 0	-0.2	-0.1	0.2	0.4	0.7	0.9	1.0	1.1	1.5	2.0	3.1	3.3	4.9	6.8	8.3	
-40 to -20	-0.1	0.0	0.2	0.4	0.7	0.9	1.0	1.1	1.4	1.9	3.0	3.1	4.6	6.4	7.8	
-60 to -40 (ref.)	0.0	0.1	0.4	0.5	0.7	1.0	1.1	1.1	1.5	1.9	2.9	3.1	4.4	6.1	7.3	
-70 to -60 (ref.)	0.2	0.3	0.5	0.7	0.9	1.1	1.2	1.3	1.6	2.0	3.0	3.1	4.4	5.9	7.1	

Absolute Δn/ΔT [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	-0.7	-0.6	-0.2	0.0	0.3	0.7	0.8	0.9	1.4	2.0	3.5	3.7	5.8	8.4	10.4	
60 to 80	-0.9	-0.8	-0.5	-0.2	0.1	0.4	0.5	0.6	1.1	1.7	3.1	3.3	5.3	7.8	9.7	
40 to 60	-1.2	-1.1	-0.8	-0.6	-0.3	0.0	0.1	0.2	0.7	1.3	2.6	2.8	4.7	7.0	8.8	
20 to 40	-1.6	-1.4	-1.1	-0.9	-0.7	-0.4	-0.3	-0.2	0.3	0.8	2.1	2.3	4.0	6.2	7.9	
0 to 20	-1.9	-1.8	-1.5	-1.3	-1.0	-0.7	-0.7	-0.6	-0.2	0.4	1.6	1.7	3.4	5.4	7.0	
-20 to 0	-2.2	-2.1	-1.8	-1.6	-1.4	-1.1	-1.0	-1.0	-0.6	-0.1	1.0	1.2	2.7	4.6	6.1	
-40 to -20	-2.5	-2.4	-2.1	-1.9	-1.7	-1.5	-1.4	-1.3	-1.0	-0.5	0.5	0.7	2.1	3.8	5.2	
-60 to -40	-2.8	-2.7	-2.5	-2.3	-2.1	-1.9	-1.8	-1.7	-1.4	-1.0	0.0	0.1	1.4	3.0	4.3	
-70 to -60	-3.0	-2.9	-2.7	-2.5	-2.4	-2.2	-2.1	-2.0	-1.7	-1.3	-0.4	-0.3	1.0	2.4	3.6	

Coef. disp. form. (frac. eq.) (ref.)	
P1	9.29465786E-02
Q1	6.79977659E+01
P2	2.55330790E-02
Q2	6.29260605E-02
P3	3.80476109E-01
Q3	9.01929143E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	1.0	9.5
Frac. eq. (ref.)	2.7	14.1

Prod. Freq. (A to D)	B
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Similar glass type			
OHARA	S-TIH11	HOYA	FD110
CDGM	H-ZF13	SCHOTT	N-SF11

2022-7-1	StP, AP, SP
2019-4-1	Transmittance
2016-4-1	Prod. Freq