

J-SF15

$n_d = 1.698950$

$n_e = 1.704427$

$v_d = 30.13$

$v_e = 29.89$

Glass code (d)
699301
Glass code (e)
704299

Spectral l.	Refractive idx
2.058	1.65842
1.970	1.65981
1.530	1.66653
1.129	1.67350
1.064	1.67493
t	1.67616
s	1.68124
A'	1.684973
r	1.688547
C	1.692227
C'	1.693276
He-Ne	1.694263
D	1.698749
d	1.698950
e	1.704427
F	1.715424
F'	1.716840
g	1.729392
h	1.741843
0.389	1.749895
i	-

Coef. disp. form. (pwr ser.)	
A0	2.79018804E+00
A1	-1.10845992E-02
A2	0.00000000E+00
A3	2.97256583E-02
A4	2.19337541E-03
A5	-3.59769888E-04
A6	8.12762977E-05
A7	-8.02301606E-06
A8	3.73019506E-07

Partial dispersion	
F-C	0.023197
F'-C'	0.023564
C-t	0.016067
C-A'	0.007254
d-C	0.006723
e-C	0.012200
g-d	0.030442
g-F	0.013968
h-g	0.012451
i-g	-
C'-t	0.017116
e-C'	0.011151
F'-e	0.012413
i-F'	-

Relative partial dispersion	
C-t/F-C	0.6926
C-A'/F-C	0.3127
d-C/F-C	0.2898
e-C/F-C	0.5259
g-d/F-C	1.3123
g-F/F-C	0.6021
h-g/F-C	0.5368
i-g/F-C	-
C'-t/F'-C'	0.7264
e-C'/F'-C'	0.4732
F'-e/F'-C'	0.5268
i-F'/F'-C'	-

Deviation of relative partial disp.	
ΔPdC	-0.0010
ΔPgF	0.0083

Internal CC (80%/5%)	
387/358	

Color Code (80%/5%)	
405/360	

CCI	
B	0.00
G	1.73
R	1.79

Thermal properties	
CTE(-30,70) [1E-7/°C]	92
CTE(100,300) [1E-7/°C]	113
Tg [°C]	571
At [°C]	606
Ht condct. [W/m·K]	1.071
Sp. heat [kJ/kg·K]	0.738
Ht diffus. [1E-6 m2/sec]	0.490

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	468 (5)
Abrasion hardness	167
Young's mod. [GPa]	84.2
Shear mod. [GPa]	33.6
Poisson's ratio	0.254
Stress optical coef. [1E-5 nm/cm/Pa]	2.84

Internal trans. (10mm)	
λ [nm]	τ
280	0.00
290	0.00
300	0.00
310	0.00
320	0.00
330	0.00
340	0.00
350	0.00
360	0.08
370	0.34
380	0.66
390	0.84
400	0.916
420	0.963
440	0.975
460	0.982
480	0.987
500	0.990
550	0.995
600	0.996
650	0.996
700	0.997
800	0.995
900	0.993
1000	0.994
1200	0.996
1400	0.991
1600	0.988
1800	0.970
2000	0.951
2200	0.907
2400	0.86

Specific gravity	
2.95	

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.)	-0.1	0.0	0.2	0.5	0.7	1.0	1.1	1.2	1.5	2.0	3.1	3.2	4.7	6.5	7.8	
60 to 80 (ref.)	-0.2	-0.1	0.2	0.4	0.6	0.9	1.0	1.0	1.4	1.8	2.9	3.0	4.5	6.2	7.4	
40 to 60	-0.3	-0.2	0.0	0.3	0.5	0.7	0.8	0.9	1.2	1.7	2.7	2.8	4.2	5.8	6.9	
20 to 40	-0.4	-0.3	0.0	0.2	0.4	0.6	0.7	0.8	1.1	1.5	2.4	2.6	3.9	5.4	6.5	
0 to 20	-0.4	-0.3	-0.1	0.1	0.3	0.5	0.6	0.7	1.0	1.4	2.3	2.4	3.6	5.1	6.1	
-20 to 0	-0.4	-0.3	-0.1	0.1	0.3	0.5	0.6	0.6	0.9	1.3	2.2	2.3	3.5	4.8	5.8	
-40 to -20	-0.3	-0.2	0.0	0.2	0.4	0.6	0.6	0.7	1.0	1.3	2.1	2.2	3.3	4.6	5.5	
-60 to -40 (ref.)	-0.1	0.0	0.2	0.3	0.5	0.7	0.8	0.8	1.1	1.4	2.2	2.3	3.3	4.5	5.3	
-70 to -60 (ref.)	0.1	0.2	0.4	0.5	0.7	0.9	0.9	1.0	1.3	1.6	2.3	2.4	3.4	4.5	5.3	

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	-1.1	-1.1	-0.8	-0.6	-0.3	0.0	0.0	0.1	0.5	0.9	2.0	2.2	3.6	5.4	6.7	
60 to 80	-1.3	-1.2	-1.0	-0.8	-0.5	-0.3	-0.2	-0.1	0.2	0.7	1.7	1.9	3.3	5.0	6.2	
40 to 60	-1.6	-1.5	-1.2	-1.0	-0.8	-0.6	-0.5	-0.4	-0.1	0.3	1.3	1.5	2.8	4.4	5.6	
20 to 40	-1.8	-1.7	-1.5	-1.3	-1.1	-0.8	-0.8	-0.7	-0.4	0.0	0.9	1.1	2.4	3.9	4.9	
0 to 20	-2.0	-2.0	-1.8	-1.6	-1.4	-1.1	-1.1	-1.0	-0.7	-0.3	0.6	0.7	1.9	3.3	4.3	
-20 to 0	-2.3	-2.2	-2.0	-1.8	-1.6	-1.4	-1.4	-1.3	-1.0	-0.7	0.2	0.3	1.4	2.8	3.7	
-40 to -20	-2.5	-2.5	-2.3	-2.1	-1.9	-1.7	-1.7	-1.6	-1.3	-1.0	-0.2	-0.1	1.0	2.2	3.1	
-60 to -40	-2.8	-2.7	-2.5	-2.4	-2.2	-2.0	-2.0	-1.9	-1.7	-1.3	-0.6	-0.5	0.5	1.6	2.4	
-70 to -60	-3.0	-2.9	-2.7	-2.6	-2.4	-2.2	-2.2	-2.1	-1.9	-1.6	-0.9	-0.8	0.1	1.2	2.0	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.11922422E-01
Q1	8.31931901E+01
P2	2.08150315E-02
Q2	5.98208007E-02
P3	3.52661928E-01
Q3	8.29447247E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.8	5.0
Frac. eq. (ref.)	1.9	9.8

Prod. Freq. (A to D)	C
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Similar glass type			
OHARA	S-TIM35	HOYA	E-FD15
CDGM	H-ZF11	SCHOTT	N-SF15

2019-4-1	Transmittance
2015-4-1	Color Code
2009-9-1	1st edition