

# J-F8

$n_d = 1.595510$

$n_e = 1.599109$

$v_d = 39.21$

$v_e = 38.94$

Glass code (d)
596392
Glass code (e)
599389

Spectral l.	Refractive idx
2.058	1.56450
1.970	1.56581
1.530	1.57196
1.129	1.57773
1.064	1.57884
t	1.57977
s	1.58346
A'	1.586081
r	1.588536
C	1.591028
C'	1.591733
He-Ne	1.592393
D	1.595377
d	1.595510
e	1.599109
F	1.606214
F'	1.607118
g	1.615031
h	1.622705
0.389	1.627568
i	-

Coef. disp. form. (pwr ser.)	
A0	2.48625113E+00
A1	-1.00589301E-02
A2	-3.66798847E-05
A3	1.96315837E-02
A4	7.63732181E-04
A5	-3.17124943E-05
A6	5.33168997E-06
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.015186
F'-C'	0.015385
C-t	0.011262
C-A'	0.004947
d-C	0.004482
e-C	0.008081
g-d	0.019521
g-F	0.008817
h-g	0.007674
i-g	-
C'-t	0.011967
e-C'	0.007376
F'-e	0.008009
i-F'	-

Relative partial dispersion	
C-t/F-C	0.7416
C-A'/F-C	0.3258
d-C/F-C	0.2951
e-C/F-C	0.5321
g-d/F-C	1.2855
g-F/F-C	0.5806
h-g/F-C	0.5053
i-g/F-C	-
C'-t/F'-C'	0.7778
e-C'/F'-C'	0.4794
F'-e/F'-C'	0.5206
i-F'/F'-C'	-

Deviation of relative partial disp.	
$\Delta PdC$	0.0002
$\Delta PgF$	0.0020

Internal CC (80%/5%)	
377/350	
Color Code (80%/5%)	
385/350	
CCI	
B	0.00
G	0.72
R	0.73

Thermal properties	
CTE(-30,70) [1E-7/°C]	78
CTE(100,300) [1E-7/°C]	91
Tg [°C]	580
At [°C]	627
StP [°C]	-
AP [°C]	-
SP [°C]	-
Ht condct. [W/m·K]	1.070
Sp. heat [kJ/kg·K]	0.732
Ht diffus. [1E-6 m2/sec]	0.556

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	483 (5)
Abrasion hardness	112
Young's mod. [GPa]	77.3
Shear mod. [GPa]	31.4
Poisson's ratio	0.231
Stress optical coef. [1E-5 nm/cm/Pa]	3.07

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	-
290	-
300	-
310	-
320	-
330	-
340	-
350	0.05
360	0.29
370	0.64
380	0.85
390	0.933
400	0.966
420	0.985
440	0.990
460	0.992
480	0.994
500	0.995
550	0.997
600	0.998
650	0.997
700	0.999
800	0.998
900	0.996
1000	0.995
1200	0.993
1400	0.987
1600	0.986
1800	0.972
2000	0.954
2200	0.89
2400	0.88

Specific gravity	
2.63	

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.)	2.3	2.3	2.5	2.7	2.9	3.1	3.1	3.2	3.5	3.8	4.4	4.5	5.4	6.4	7.0	
60 to 80 (ref.)	2.2	2.2	2.4	2.6	2.8	3.0	3.0	3.1	3.3	3.6	4.3	4.4	5.2	6.1	6.8	
40 to 60	2.1	2.1	2.3	2.5	2.6	2.8	2.9	2.9	3.2	3.4	4.1	4.2	5.0	5.8	6.4	
20 to 40	2.0	2.0	2.2	2.4	2.5	2.7	2.7	2.8	3.0	3.3	3.9	4.0	4.7	5.6	6.2	
0 to 20	1.9	2.0	2.1	2.3	2.4	2.6	2.7	2.7	2.9	3.2	3.8	3.8	4.6	5.4	5.9	
-20 to 0	1.9	2.0	2.1	2.3	2.4	2.6	2.6	2.7	2.9	3.1	3.7	3.7	4.4	5.2	5.7	
-40 to -20	2.0	2.0	2.2	2.3	2.5	2.6	2.7	2.7	2.9	3.1	3.6	3.7	4.4	5.1	5.6	
-60 to -40 (ref.)	2.2	2.2	2.3	2.5	2.6	2.7	2.8	2.8	3.0	3.2	3.7	3.8	4.4	5.1	5.6	
-70 to -60 (ref.)	2.3	2.4	2.5	2.6	2.8	2.9	2.9	3.0	3.2	3.4	3.8	3.9	4.5	5.2	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	1.3	1.4	1.5	1.7	1.9	2.1	2.1	2.2	2.5	2.8	3.4	3.5	4.4	5.3	6.0	
60 to 80	1.1	1.2	1.3	1.5	1.7	1.9	1.9	2.0	2.2	2.5	3.2	3.3	4.1	5.0	5.6	
40 to 60	0.9	0.9	1.1	1.2	1.4	1.6	1.6	1.7	1.9	2.2	2.8	2.9	3.7	4.6	5.2	
20 to 40	0.6	0.7	0.8	1.0	1.1	1.3	1.4	1.4	1.6	1.9	2.5	2.6	3.3	4.1	4.7	
0 to 20	0.4	0.4	0.6	0.7	0.9	1.0	1.1	1.1	1.3	1.6	2.1	2.2	2.9	3.7	4.2	
-20 to 0	0.1	0.2	0.3	0.4	0.6	0.7	0.8	0.8	1.0	1.3	1.8	1.9	2.5	3.3	3.8	
-40 to -20	-0.1	-0.1	0.0	0.2	0.3	0.5	0.5	0.5	0.7	1.0	1.4	1.5	2.1	2.8	3.3	
-60 to -40	-0.4	-0.3	-0.2	-0.1	0.0	0.2	0.2	0.2	0.4	0.6	1.1	1.2	1.8	2.4	2.9	
-70 to -60	-0.6	-0.5	-0.4	-0.3	-0.2	0.0	0.0	0.0	0.2	0.4	0.8	0.9	1.5	2.1	2.5	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.23388650E-01
Q1	8.57201552E+01
P2	1.44977538E-02
Q2	5.45737083E-02
P3	3.16679170E-01
Q3	7.07804359E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.9	6.0
Frac. eq. (ref.)	0.9	5.5

Prod. Freq. (A to D)	C
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Similar glass type			
OHARA	S-TIM8	HOYA	E-F8
CDGM	H-QF14	SCHOTT	-

2019-4-1	Transmittance
2018-4-1	Prod. Freq.
2015-4-1	Color Code, Similar glass type