

# J-F2

$n_d = 1.620040$

$n_e = 1.624072$

$v_d = 36.40$

$v_e = 36.13$

Glass code (d)
620364
Glass code (e)
624361

Spectral l.	Refractive idx
2.058	1.58620
1.970	1.58759
1.530	1.59416
1.129	1.60039
1.064	1.60159
t	1.60260
s	1.60665
A'	1.609544
r	1.612266
C	1.615037
C'	1.615823
He-Ne	1.616559
D	1.619891
d	1.620040
e	1.624072
F	1.632073
F'	1.633095
g	1.642086
h	1.650877
0.389	1.656494
i	1.667178

Coef. disp. form. (pwr ser.)	
A0	2.55848782E+00
A1	-1.11821288E-02
A2	0.00000000E+00
A3	2.03054502E-02
A4	2.04096825E-03
A5	-4.37338902E-04
A6	8.55288881E-05
A7	-7.96769390E-06
A8	3.26555576E-07

Partial dispersion	
F-C	0.017036
F'-C'	0.017272
C-t	0.012433
C-A'	0.005493
d-C	0.005003
e-C	0.009035
g-d	0.022046
g-F	0.010013
h-g	0.008791
i-g	0.025092
C'-t	0.013219
e-C'	0.008249
F'-e	0.009023
i-F'	-

Relative partial dispersion	
C-t/F-C	0.7298
C-A'/F-C	0.3224
d-C/F-C	0.2937
e-C/F-C	0.5303
g-d/F-C	1.2941
g-F/F-C	0.5878
h-g/F-C	0.5160
i-g/F-C	1.4729
C'-t/F'-C'	0.7653
e-C'/F'-C'	0.4776
F'-e/F'-C'	0.5224
i-F'/F'-C'	1.9733

Deviation of relative partial disp.	
$\Delta PdC$	0.0000
$\Delta PgF$	0.0045

Internal CC (80%/5%)	
380/353	
Color Code (80%/5%)	
390/355	
CCI	
B	0.00
G	0.83
R	0.86

Thermal properties	
CTE(-30,70) [1E-7/°C]	73
CTE(100,300) [1E-7/°C]	91
Tg [°C]	581
At [°C]	613
StP [°C]	540
AP [°C]	571
SP [°C]	710
Ht condct. [W/m·K]	1.180
Sp. heat [kJ/kg·K]	0.762
Ht diffus. [1E-6 m2/sec]	0.580

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	493 (5)
Abrasion hardness	109
Young's mod. [GPa]	82.5
Shear mod. [GPa]	33.5
Poisson's ratio	0.231
Stress optical coef. [1E-5 nm/cm/Pa]	3.15

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	-
290	-
300	-
310	-
320	-
330	-
340	-
350	0.02
360	0.19
370	0.55
380	0.81
390	0.922
400	0.962
420	0.984
440	0.988
460	0.990
480	0.992
500	0.994
550	0.997
600	0.997
650	0.997
700	0.998
800	0.997
900	0.996
1000	0.996
1200	0.997
1400	0.985
1600	0.988
1800	0.973
2000	0.957
2200	0.88
2400	0.85

Specific gravity
2.66

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.)	2.4	2.5	2.7	2.9	3.1	3.3	3.4	3.5	3.8	4.1	4.9	5.0	6.1	7.3	8.1	
60 to 80 (ref.)	2.3	2.4	2.6	2.8	3.0	3.2	3.3	3.3	3.6	3.9	4.7	4.8	5.9	7.0	7.8	
40 to 60	2.2	2.3	2.5	2.7	2.9	3.0	3.1	3.2	3.4	3.8	4.5	4.6	5.6	6.7	7.4	
20 to 40	2.1	2.2	2.4	2.6	2.7	2.9	3.0	3.0	3.3	3.6	4.3	4.4	5.3	6.3	7.0	
0 to 20	2.1	2.1	2.3	2.5	2.7	2.8	2.9	2.9	3.2	3.5	4.1	4.2	5.1	6.1	6.7	
-20 to 0	2.1	2.1	2.3	2.5	2.6	2.8	2.8	2.9	3.1	3.4	4.0	4.1	4.9	5.8	6.4	
-40 to -20	2.1	2.2	2.3	2.5	2.7	2.8	2.9	2.9	3.1	3.4	4.0	4.0	4.8	5.7	6.2	
-60 to -40 (ref.)	2.3	2.3	2.5	2.6	2.8	2.9	3.0	3.0	3.2	3.5	4.0	4.1	4.8	5.6	6.1	
-70 to -60 (ref.)	2.5	2.5	2.7	2.8	2.9	3.1	3.1	3.2	3.4	3.6	4.1	4.2	4.9	5.6	6.1	

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	1.5	1.5	1.7	1.9	2.1	2.3	2.4	2.5	2.7	3.1	3.9	4.0	5.1	6.3	7.1	
60 to 80	1.3	1.3	1.5	1.7	1.9	2.1	2.2	2.2	2.5	2.8	3.6	3.7	4.7	5.9	6.7	
40 to 60	1.0	1.1	1.3	1.4	1.6	1.8	1.9	1.9	2.2	2.5	3.2	3.3	4.3	5.4	6.1	
20 to 40	0.8	0.8	1.0	1.2	1.3	1.5	1.6	1.6	1.9	2.2	2.8	2.9	3.9	4.9	5.6	
0 to 20	0.5	0.5	0.7	0.9	1.0	1.2	1.3	1.3	1.5	1.8	2.5	2.6	3.4	4.4	5.0	
-20 to 0	0.2	0.3	0.5	0.6	0.8	0.9	1.0	1.0	1.2	1.5	2.1	2.2	3.0	3.9	4.5	
-40 to -20	0.0	0.0	0.2	0.3	0.5	0.6	0.7	0.7	0.9	1.2	1.7	1.8	2.6	3.4	3.9	
-60 to -40	-0.3	-0.2	-0.1	0.0	0.2	0.3	0.4	0.4	0.6	0.8	1.3	1.4	2.1	2.9	3.4	
-70 to -60	-0.4	-0.4	-0.3	-0.2	0.0	0.1	0.1	0.2	0.4	0.6	1.1	1.1	1.8	2.5	3.0	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.04096463E-01
Q1	7.05431896E+01
P2	1.38585424E-02
Q2	5.95211317E-02
P3	3.27695044E-01
Q3	7.58005779E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	1.0	6.2
Frac. eq. (ref.)	2.0	12.3

Prod. Freq. (A to D)	B
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Similar glass type			
OHARA	S-TIM2	HOYA	E-F2
CDGM	H-F4	SCHOTT	N-F2

2022-7-1	StP, AP, SP
2019-4-1	Transmittance
2015-4-1	Color Code, Prod. Freq