

J-F5

$n_d = 1.603420$

$n_e = 1.607179$

$v_d = 38.03$

$v_e = 37.76$

Glass code (d)
603380
Glass code (e)
607378

Spectral l.	Refractive idx
2.058	1.57152
1.970	1.57286
1.530	1.57909
1.129	1.58497
1.064	1.58610
t	1.58706
s	1.59088
A'	1.593601
r	1.596154
C	1.598747
C'	1.599482
He-Ne	1.600170
D	1.603281
d	1.603420
e	1.607179
F	1.614615
F'	1.615562
g	1.623865
h	1.631934
0.389	1.637063
i	1.646748

Coef. disp. form. (pwr ser.)	
A0	2.50730433E+00
A1	-9.63920240E-03
A2	-1.08925344E-04
A3	2.17730330E-02
A4	2.15713900E-04
A5	1.15184205E-04
A6	-1.21949895E-05
A7	8.47741632E-07
A8	0.00000000E+00

Partial dispersion	
F-C	0.015868
F'-C'	0.016080
C-t	0.011688
C-A'	0.005146
d-C	0.004673
e-C	0.008432
g-d	0.020445
g-F	0.009250
h-g	0.008069
i-g	0.022883
C'-t	0.012423
e-C'	0.007697
F'-e	0.008383
i-F'	0.031186

Relative partial dispersion	
C-t/F-C	0.7366
C-A'/F-C	0.3243
d-C/F-C	0.2945
e-C/F-C	0.5314
g-d/F-C	1.2884
g-F/F-C	0.5829
h-g/F-C	0.5085
i-g/F-C	1.4421
C'-t/F'-C'	0.7726
e-C'/F'-C'	0.4787
F'-e/F'-C'	0.5213
i-F'/F'-C'	1.9394

Deviation of relative partial disp.	
ΔPdC	0.0001
ΔPgF	0.0024

Internal CC (80%/5%)	
378/352	

Color Code (80%/5%)	
385/350	

CCI	
B	0.00
G	0.77
R	0.76

Thermal properties	
CTE(-30,70) [1E-7/°C]	77
CTE(100,300) [1E-7/°C]	92
Tg [°C]	583
At [°C]	624
Ht condct. [W/m·K]	1.085
Sp. heat [kJ/kg·K]	0.751
Ht diffus. [1E-6 m2/sec]	0.547

Chemical properties [class]	
Acid res. (surface)	1
Alkaline detergent res.	1
Climate resistance	1
Water res. (powder)	3
Acid res. (powder)	1

Mechanical properties	
Knoop hardness	485 (5)
Abrasion hardness	103
Young's mod. [GPa]	77.2
Shear mod. [GPa]	31.4
Poisson's ratio	0.227
Stress optical coef. [1E-5 nm/cm/Pa]	3.09

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	0.03
360	0.24
370	0.60
380	0.83
390	0.927
400	0.964
420	0.985
440	0.990
460	0.992
480	0.994
500	0.995
550	0.997
600	0.997
650	0.997
700	0.998
800	0.998
900	0.999
1000	0.999
1200	0.998
1400	0.992
1600	0.991
1800	0.973
2000	0.950
2200	0.88
2400	0.86

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.)	2.4	2.4	2.6	2.9	3.1	3.3	3.3	3.4	3.7	4.0	4.7	4.8	5.7	6.8	7.4	
60 to 80 (ref.)	2.3	2.3	2.6	2.7	2.9	3.1	3.2	3.3	3.5	3.8	4.5	4.6	5.5	6.5	7.1	
40 to 60	2.2	2.2	2.4	2.6	2.8	3.0	3.0	3.1	3.3	3.6	4.3	4.4	5.3	6.2	6.8	
20 to 40	2.1	2.1	2.3	2.5	2.7	2.9	2.9	3.0	3.2	3.5	4.1	4.2	5.0	6.0	6.5	
0 to 20	2.0	2.1	2.2	2.4	2.6	2.8	2.8	2.9	3.1	3.3	3.9	4.0	4.9	5.7	6.3	
-20 to 0	2.0	2.0	2.2	2.4	2.6	2.7	2.8	2.8	3.0	3.3	3.8	3.9	4.7	5.5	6.0	
-40 to -20	2.1	2.1	2.3	2.4	2.6	2.8	2.8	2.8	3.0	3.3	3.8	3.9	4.6	5.4	5.9	
-60 to -40 (ref.)	2.2	2.2	2.4	2.6	2.7	2.9	2.9	3.0	3.1	3.4	3.9	3.9	4.7	5.4	5.9	
-70 to -60 (ref.)	2.4	2.4	2.6	2.7	2.9	3.0	3.1	3.1	3.3	3.5	4.0	4.1	4.8	5.5	5.9	

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	1.4	1.5	1.7	1.9	2.1	2.3	2.3	2.4	2.7	3.0	3.6	3.7	4.7	5.7	6.4	
60 to 80	1.3	1.3	1.5	1.7	1.9	2.1	2.1	2.2	2.4	2.7	3.4	3.5	4.4	5.4	6.0	
40 to 60	1.0	1.0	1.2	1.4	1.6	1.8	1.8	1.9	2.1	2.4	3.0	3.1	4.0	5.0	5.5	
20 to 40	0.7	0.7	0.9	1.1	1.3	1.5	1.5	1.6	1.8	2.1	2.7	2.8	3.6	4.5	5.1	
0 to 20	0.5	0.5	0.7	0.8	1.0	1.2	1.2	1.3	1.5	1.7	2.3	2.4	3.2	4.1	4.6	
-20 to 0	0.2	0.2	0.4	0.6	0.7	0.9	0.9	1.0	1.2	1.4	2.0	2.0	2.8	3.6	4.1	
-40 to -20	0.0	0.0	0.1	0.3	0.4	0.6	0.6	0.7	0.9	1.1	1.6	1.7	2.4	3.2	3.6	
-60 to -40	-0.3	-0.3	-0.2	0.0	0.1	0.3	0.3	0.4	0.6	0.8	1.2	1.3	2.0	2.7	3.2	
-70 to -60	-0.5	-0.5	-0.4	-0.2	-0.1	0.1	0.1	0.2	0.3	0.5	1.0	1.0	1.7	2.4	2.8	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.03312268E-01
Q1	7.25877221E+01
P2	1.31044204E-02
Q2	5.75938132E-02
P3	3.21354498E-01
Q3	7.45537642E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.6	4.5
Frac. eq. (ref.)	2.1	10.6

Prod. Freq. (A to D)	C
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Similar glass type			
OHARA	S-TIM5	HOYA	E-F5
CDGM	H-F1	SCHOTT	-

2019-4-1	Transmittance
2015-4-1	Color Code, Similar glass type
2011-2-1	Stress optical coefficient