

# 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.	
$\Delta PdC$	0.0001
$\Delta PgF$	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
StP [°C]	528
AP [°C]	565
SP [°C]	714
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)		
$\lambda$ [nm]	$\tau$	
280	-	
290	-	
300	-	
310	-	
320	-	
330	-	
340	-	
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. $\sigma$ [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	-

2022-7-1	StP, AP, SP
2019-4-1	Transmittance
2015-4-1	Color Code, Similar glass type