

# J-F16

$n_d = 1.592700$

$n_e = 1.596673$

$v_d = 35.27$

$v_e = 35.00$

Glass code (d)	593353
Glass code (e)	597350

Spectral l.	Refractive idx
2.058	1.56023
1.970	1.56153
1.530	1.56767
1.129	1.57358
1.064	1.57472
t	1.57570
s	1.57961
A'	1.582422
r	1.585077
C	1.587788
C'	1.588558
He-Ne	1.589281
D	1.592554
d	1.592700
e	1.596673
F	1.604592
F'	1.605607
g	1.614567
h	1.623384
0.389	1.629044
i	1.639866

Coef. disp. form. (pwr ser.)	
A0	2.47262695E+00
A1	-1.01687674E-02
A2	0.00000000E+00
A3	1.97436840E-02
A4	1.81579852E-03
A5	-3.58960460E-04
A6	7.21398135E-05
A7	-6.71121675E-06
A8	2.80287467E-07

Partial dispersion	
F-C	0.016804
F'-C'	0.017049
C-t	0.012091
C-A'	0.005366
d-C	0.004912
e-C	0.008885
g-d	0.021867
g-F	0.009975
h-g	0.008817
i-g	0.025299
C'-t	0.012861
e-C'	0.008115
F'-e	0.008934
i-F'	0.034259

Relative partial dispersion	
C-t/F-C	0.7195
C-A'/F-C	0.3193
d-C/F-C	0.2923
e-C/F-C	0.5287
g-d/F-C	1.3013
g-F/F-C	0.5936
h-g/F-C	0.5247
i-g/F-C	1.5055
C'-t/F'-C'	0.7544
e-C'/F'-C'	0.4760
F'-e/F'-C'	0.5240
i-F'/F'-C'	2.0094

Deviation of relative partial disp.	
$\Delta PdC$	-0.0008
$\Delta PgF$	0.0084

Internal CC (80%/5%)	
371/347	

Color Code (80%/5%)	
380/350	

CCI	
B	0.00
G	0.59
R	0.58

Thermal properties	
CTE(-30,70) [1E-7/°C]	86
CTE(100,300) [1E-7/°C]	99
Tg [°C]	494
At [°C]	553
Ht condct. [W/m·K]	0.968
Sp. heat [kJ/kg·K]	0.721
Ht diffus. [1E-6 m2/sec]	0.509

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

Mechanical properties	
Knoop hardness	419 (4)
Abrasion hardness	154
Young's mod. [GPa]	64.2
Shear mod. [GPa]	25.8
Poisson's ratio	0.245
Stress optical coef. [1E-5 nm/cm/Pa]	3.22

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	0.00
290	0.00
300	0.00
310	0.00
320	0.00
330	0.00
340	0.00
350	0.10
360	0.43
370	0.77
380	0.913
390	0.961
400	0.977
420	0.986
440	0.987
460	0.990
480	0.992
500	0.994
550	0.997
600	0.998
650	0.996
700	0.997
800	0.996
900	0.996
1000	0.997
1200	0.998
1400	0.994
1600	0.988
1800	0.980
2000	0.980
2200	0.945
2400	0.940

Specific gravity	
2.64	

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.)	-0.5	-0.4	-0.3	-0.1	0.1	0.3	0.4	0.4	0.7	1.0	1.8	1.9	2.9	4.0	4.8	
60 to 80 (ref.)	-0.6	-0.5	-0.3	-0.2	0.0	0.2	0.3	0.3	0.6	0.9	1.6	1.7	2.7	3.8	4.5	
40 to 60	-0.7	-0.7	-0.5	-0.3	-0.1	0.1	0.1	0.2	0.4	0.7	1.4	1.5	2.4	3.5	4.2	
20 to 40	-0.8	-0.7	-0.6	-0.4	-0.2	-0.1	0.0	0.0	0.3	0.6	1.2	1.3	2.2	3.2	3.9	
0 to 20	-0.8	-0.8	-0.6	-0.5	-0.3	-0.2	-0.1	-0.1	0.2	0.4	1.1	1.2	2.0	3.0	3.6	
-20 to 0	-0.8	-0.8	-0.6	-0.5	-0.3	-0.2	-0.1	-0.1	0.1	0.4	1.0	1.1	1.9	2.8	3.4	
-40 to -20	-0.8	-0.7	-0.6	-0.5	-0.3	-0.2	-0.1	-0.1	0.1	0.4	0.9	1.0	1.8	2.7	3.3	
-60 to -40 (ref.)	-0.6	-0.6	-0.5	-0.3	-0.2	0.0	0.0	0.0	0.2	0.5	1.0	1.1	1.8	2.7	3.2	
-70 to -60 (ref.)	-0.4	-0.4	-0.3	-0.1	0.0	0.1	0.2	0.2	0.4	0.6	1.1	1.2	1.9	2.7	3.3	

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	-1.4	-1.4	-1.2	-1.0	-0.9	-0.7	-0.6	-0.5	-0.3	0.0	0.8	0.9	1.9	3.0	3.8	
60 to 80	-1.6	-1.6	-1.4	-1.2	-1.1	-0.9	-0.8	-0.8	-0.5	-0.2	0.5	0.6	1.6	2.7	3.4	
40 to 60	-1.9	-1.8	-1.7	-1.5	-1.3	-1.2	-1.1	-1.1	-0.8	-0.5	0.2	0.2	1.2	2.2	2.9	
20 to 40	-2.1	-2.1	-1.9	-1.8	-1.6	-1.4	-1.4	-1.4	-1.1	-0.8	-0.2	-0.1	0.8	1.8	2.4	
0 to 20	-2.4	-2.3	-2.2	-2.0	-1.9	-1.7	-1.7	-1.6	-1.4	-1.2	-0.5	-0.5	0.4	1.3	2.0	
-20 to 0	-2.6	-2.6	-2.5	-2.3	-2.2	-2.0	-2.0	-1.9	-1.7	-1.5	-0.9	-0.8	0.0	0.9	1.5	
-40 to -20	-2.9	-2.9	-2.7	-2.6	-2.5	-2.3	-2.3	-2.2	-2.0	-1.8	-1.3	-1.2	-0.4	0.4	1.0	
-60 to -40	-3.1	-3.1	-3.0	-2.9	-2.7	-2.6	-2.6	-2.5	-2.3	-2.1	-1.6	-1.5	-0.8	0.0	0.5	
-70 to -60	-3.3	-3.3	-3.2	-3.1	-2.9	-2.8	-2.8	-2.7	-2.6	-2.4	-1.9	-1.8	-1.1	-0.4	0.2	

Coef. disp. form. (frac. eq.) (ref.)	
P1	9.48272387E-02
Q1	6.81020799E+01
P2	1.61938727E-02
Q2	5.90567549E-02
P3	3.12759244E-01
Q3	7.46626033E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.8	8.0
Frac. eq. (ref.)	2.0	15.3

Prod. Freq. (A to D)	D
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Similar glass type			
OHARA	S-FTM16	HOYA	FF5
CDGM	-	SCHOTT	-

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