

J-LF5

$n_d = 1.581440$

$n_e = 1.584805$

$v_d = 40.98$

$v_e = 40.70$

Glass code (d)	581410
Glass code (e)	585407

Spectral l.	Refractive idx
2.058	1.55179
1.970	1.55308
1.530	1.55908
1.129	1.56464
1.064	1.56570
t	1.56659
s	1.57010
A'	1.572581
r	1.574895
C	1.577238
C'	1.577900
He-Ne	1.578520
D	1.581315
d	1.581440
e	1.584805
F	1.591428
F'	1.592268
g	1.599606
h	1.606684
0.389	1.611153
i	1.619523

Coef. disp. form. (pwr ser.)	
A0	2.44484793E+00
A1	-9.36437503E-03
A2	-9.46881204E-05
A3	1.93135291E-02
A4	2.36834809E-04
A5	7.55993911E-05
A6	-7.53407578E-06
A7	5.41756865E-07
A8	0.00000000E+00

Partial dispersion	
F-C	0.014190
F'-C'	0.014368
C-t	0.010652
C-A'	0.004657
d-C	0.004202
e-C	0.007567
g-d	0.018166
g-F	0.008178
h-g	0.007078
i-g	0.019917
C'-t	0.011314
e-C'	0.006905
F'-e	0.007463
i-F'	0.027255

Relative partial dispersion	
C-t/F-C	0.7507
C-A'/F-C	0.3282
d-C/F-C	0.2961
e-C/F-C	0.5333
g-d/F-C	1.2802
g-F/F-C	0.5763
h-g/F-C	0.4988
i-g/F-C	1.4036
C'-t/F'-C'	0.7874
e-C'/F'-C'	0.4806
F'-e/F'-C'	0.5194
i-F'/F'-C'	1.8969

Deviation of relative partial disp.	
ΔPdC	0.0004
ΔPgF	0.0007

Internal CC (80%/5%)	
376/348	

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

CCI	
B	0.00
G	0.68
R	0.70

Thermal properties	
CTE(-30,70) [1E-7/°C]	75
CTE(100,300) [1E-7/°C]	90
Tg [°C]	576
At [°C]	623
Ht condct. [W/m·K]	1.127
Sp. heat [kJ/kg·K]	0.822
Ht diffus. [1E-6 m2/sec]	0.531

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	477 (5)
Abrasion hardness	105
Young's mod. [GPa]	75.6
Shear mod. [GPa]	30.9
Poisson's ratio	0.223
Stress optical coef. [1E-5 nm/cm/Pa]	3.17

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	0.08
360	0.35
370	0.68
380	0.86
390	0.934
400	0.966
420	0.987
440	0.990
460	0.993
480	0.995
500	0.996
550	0.998
600	0.998
650	0.998
700	0.998
800	0.996
900	0.995
1000	0.996
1200	0.997
1400	0.992
1600	0.991
1800	0.972
2000	0.949
2200	0.89
2400	0.86

Specific gravity	
2.58	

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	2.5	2.7	2.9	3.1	3.1	3.2	3.4	3.7	4.3	4.4	5.2	6.0	6.6	
60 to 80 (ref.)	2.3	2.3	2.5	2.6	2.8	3.0	3.0	3.1	3.3	3.6	4.2	4.2	5.0	5.8	6.4	
40 to 60	2.2	2.2	2.4	2.5	2.7	2.9	2.9	3.0	3.2	3.4	4.0	4.1	4.8	5.6	6.1	
20 to 40	2.1	2.2	2.3	2.5	2.6	2.8	2.8	2.9	3.1	3.3	3.9	3.9	4.6	5.4	5.9	
0 to 20	2.1	2.1	2.3	2.4	2.6	2.7	2.8	2.8	3.0	3.2	3.8	3.8	4.5	5.2	5.7	
-20 to 0	2.1	2.1	2.3	2.4	2.5	2.7	2.7	2.8	3.0	3.2	3.7	3.8	4.4	5.1	5.6	
-40 to -20	2.2	2.2	2.3	2.5	2.6	2.8	2.8	2.8	3.0	3.2	3.7	3.8	4.4	5.1	5.5	
-60 to -40 (ref.)	2.4	2.4	2.5	2.6	2.8	2.9	2.9	3.0	3.1	3.4	3.8	3.9	4.5	5.1	5.5	
-70 to -60 (ref.)	2.6	2.6	2.7	2.8	2.9	3.1	3.1	3.2	3.3	3.5	4.0	4.0	4.6	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	1.4	1.4	1.6	1.8	1.9	2.1	2.2	2.2	2.4	2.7	3.3	3.4	4.2	5.0	5.6	
60 to 80	1.2	1.3	1.4	1.6	1.7	1.9	2.0	2.0	2.2	2.5	3.1	3.2	3.9	4.7	5.3	
40 to 60	1.0	1.0	1.2	1.3	1.5	1.7	1.7	1.7	2.0	2.2	2.8	2.8	3.6	4.4	4.9	
20 to 40	0.8	0.8	0.9	1.1	1.2	1.4	1.4	1.5	1.7	1.9	2.5	2.5	3.2	4.0	4.5	
0 to 20	0.6	0.6	0.7	0.8	1.0	1.1	1.2	1.2	1.4	1.6	2.2	2.2	2.9	3.6	4.1	
-20 to 0	0.3	0.3	0.5	0.6	0.7	0.9	0.9	1.0	1.1	1.4	1.8	1.9	2.6	3.2	3.7	
-40 to -20	0.1	0.1	0.2	0.4	0.5	0.6	0.7	0.7	0.9	1.1	1.5	1.6	2.2	2.9	3.3	
-60 to -40	-0.1	-0.1	0.0	0.1	0.2	0.4	0.4	0.4	0.6	0.8	1.2	1.3	1.9	2.5	2.9	
-70 to -60	-0.3	-0.3	-0.2	-0.1	0.0	0.2	0.2	0.2	0.4	0.6	1.0	1.1	1.6	2.2	2.6	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.12159838E-01
Q1	7.90009989E+01
P2	1.17641971E-02
Q2	5.54494399E-02
P3	3.13327895E-01
Q3	7.14680751E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.5	8.2
Frac. eq. (ref.)	1.3	11.1

Prod. Freq. (A to D)	C
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Similar glass type			
OHARA	S-TIL25	HOYA	E-FL5
CDGM	H-QF50A	SCHOTT	-

2019-4-1	Transmittance
2016-4-1	Prod. Freq. Similar glass type
2015-4-1	Color Code, Prod. Freq. Similar glass type