

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
StP [°C]	516
AP [°C]	557
SP [°C]	720
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	-	
290	-	
300	-	
310	-	
320	-	
330	-	
340	-	
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
----------------------	---

Similar glass type			
OHARA	S-TIL25	HOYA	E-FL5
CDGM	H-QF50A	SCHOTT	-

2022-7-1	StP, AP, SP
2019-4-1	Transmittance
2016-4-1	Prod. Freq, Similar glass type