

# J-LF7

$n_d = 1.575010$

$n_e = 1.578295$

$v_d = 41.51$

$v_e = 41.23$

Glass code (d)
575415
Glass code (e)
578412

Spectral l.	Refractive idx
2.058	1.54615
1.970	1.54740
1.530	1.55322
1.129	1.55862
1.064	1.55965
t	1.56051
s	1.56394
A'	1.566362
r	1.568621
C	1.570908
C'	1.571555
He-Ne	1.572160
D	1.574888
d	1.575010
e	1.578295
F	1.584760
F'	1.585581
g	1.592745
h	1.599656
0.389	1.604022
i	1.612203

Coef. disp. form. (pwr ser.)	
A0	2.42574282E+00
A1	-8.90909885E-03
A2	-1.08092631E-04
A3	1.90630501E-02
A4	1.17245652E-04
A5	9.74566345E-05
A6	-9.93663901E-06
A7	6.41905453E-07
A8	0.00000000E+00

Partial dispersion	
F-C	0.013852
F'-C'	0.014026
C-t	0.010395
C-A'	0.004546
d-C	0.004102
e-C	0.007387
g-d	0.017735
g-F	0.007985
h-g	0.006911
i-g	0.019458
C'-t	0.011042
e-C'	0.006740
F'-e	0.007286
i-F'	0.026622

Relative partial dispersion	
C-t/F-C	0.7504
C-A'/F-C	0.3282
d-C/F-C	0.2961
e-C/F-C	0.5333
g-d/F-C	1.2803
g-F/F-C	0.5765
h-g/F-C	0.4989
i-g/F-C	1.4047
C'-t/F'-C'	0.7873
e-C'/F'-C'	0.4805
F'-e/F'-C'	0.5195
i-F'/F'-C'	1.8980

Deviation of relative partial disp.	
$\Delta PdC$	0.0002
$\Delta PgF$	0.0017

Internal CC (80%/5%)	
375/347	
Color Code (80%/5%)	
385/345	
CCI	
B	0.00
G	0.73
R	0.72

Thermal properties	
CTE(-30,70) [1E-7/°C]	80
CTE(100,300) [1E-7/°C]	98
Tg [°C]	535
At [°C]	590
StP [°C]	477
AP [°C]	517
SP [°C]	679
Ht condct. [W/m·K]	1.179
Sp. heat [kJ/kg·K]	0.782
Ht diffus. [1E-6 m2/sec]	0.579

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	490 (5)
Abrasion hardness	115
Young's mod. [GPa]	75.7
Shear mod. [GPa]	30.8
Poisson's ratio	0.230
Stress optical coef. [1E-5 nm/cm/Pa]	2.83

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	-
290	-
300	-
310	-
320	-
330	-
340	-
350	0.09
360	0.39
370	0.71
380	0.87
390	0.935
400	0.965
420	0.984
440	0.988
460	0.992
480	0.994
500	0.996
550	0.998
600	0.998
650	0.997
700	0.998
800	0.997
900	0.996
1000	0.996
1200	0.996
1400	0.992
1600	0.990
1800	0.975
2000	0.961
2200	0.911
2400	0.900

Specific gravity
2.6

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.)	1.7	1.7	1.9	2.1	2.2	2.4	2.4	2.5	2.7	3.0	3.6	3.7	4.4	5.3	5.9	
60 to 80 (ref.)	1.6	1.6	1.9	2.0	2.1	2.3	2.3	2.4	2.6	2.9	3.5	3.5	4.3	5.1	5.6	
40 to 60	1.5	1.5	1.7	1.9	2.0	2.2	2.2	2.3	2.5	2.7	3.3	3.4	4.1	4.8	5.4	
20 to 40	1.4	1.5	1.7	1.8	1.9	2.1	2.1	2.2	2.4	2.6	3.2	3.2	3.9	4.6	5.2	
0 to 20	1.4	1.4	1.6	1.7	1.9	2.0	2.1	2.1	2.3	2.5	3.0	3.1	3.7	4.4	5.0	
-20 to 0	1.4	1.5	1.6	1.7	1.9	2.0	2.0	2.1	2.3	2.5	3.0	3.1	3.7	4.3	4.8	
-40 to -20	1.5	1.5	1.7	1.8	1.9	2.1	2.1	2.1	2.3	2.5	3.0	3.1	3.6	4.3	4.7	
-60 to -40 (ref.)	1.7	1.7	1.9	2.0	2.1	2.2	2.2	2.3	2.5	2.7	3.1	3.2	3.7	4.3	4.7	
-70 to -60 (ref.)	1.9	1.9	2.1	2.2	2.3	2.4	2.4	2.5	2.6	2.8	3.3	3.3	3.8	4.4	4.8	

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	0.7	0.8	1.0	1.1	1.3	1.4	1.5	1.5	1.7	2.0	2.6	2.7	3.4	4.2	4.8	
60 to 80	0.5	0.6	0.8	0.9	1.1	1.2	1.3	1.3	1.5	1.8	2.4	2.5	3.2	4.0	4.5	
40 to 60	0.3	0.4	0.5	0.7	0.8	1.0	1.0	1.1	1.3	1.5	2.1	2.1	2.8	3.6	4.1	
20 to 40	0.1	0.1	0.3	0.4	0.6	0.7	0.8	0.8	1.0	1.2	1.8	1.8	2.5	3.2	3.7	
0 to 20	-0.2	-0.1	0.1	0.2	0.3	0.5	0.5	0.5	0.7	1.0	1.4	1.5	2.1	2.8	3.3	
-20 to 0	-0.4	-0.3	-0.2	-0.1	0.1	0.2	0.2	0.3	0.5	0.7	1.1	1.2	1.8	2.4	2.9	
-40 to -20	-0.6	-0.6	-0.4	-0.3	-0.2	-0.1	0.0	0.0	0.2	0.4	0.8	0.9	1.4	2.1	2.5	
-60 to -40	-0.8	-0.8	-0.6	-0.5	-0.4	-0.3	-0.3	-0.3	-0.1	0.1	0.5	0.6	1.1	1.7	2.1	
-70 to -60	-1.0	-1.0	-0.8	-0.7	-0.6	-0.5	-0.5	-0.5	-0.3	-0.1	0.3	0.3	0.8	1.4	1.8	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.06655195E-01
Q1	7.73737086E+01
P2	1.07806800E-02
Q2	5.66985919E-02
P3	3.11436527E-01
Q3	7.16172753E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.5	7.2
Frac. eq. (ref.)	1.4	9.7

Prod. Freq. (A to D)	C
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Similar glass type			
OHARA	S-TIL27	HOYA	-
CDGM	H-QF3	SCHOTT	-

2022-7-1	StP, AP, SP
2019-4-1	Transmittance
2015-4-1	Color Code, Prod. Freq