

# J-LLF6

$n_d = 1.531720$

$n_e = 1.534311$

$v_d = 48.78$

$v_e = 48.49$

Glass code (d)	532488
Glass code (e)	534485

Spectral l.	Refractive idx
2.058	1.50694
1.970	1.50811
1.530	1.51350
1.129	1.51831
1.064	1.51920
t	1.51993
s	1.52280
A'	1.524781
r	1.526614
C	1.528453
C'	1.528970
He-Ne	1.529453
D	1.531624
d	1.531720
e	1.534311
F	1.539353
F'	1.539988
g	1.545481
h	1.550696
0.389	1.553942
i	1.559910

Coef. disp. form. (pwr ser.)	
A0	2.30465477E+00
A1	-8.42372028E-03
A2	-8.53219261E-05
A3	1.43763145E-02
A4	3.30848944E-04
A5	-4.10026783E-06
A6	1.57001947E-06
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.010900
F'-C'	0.011018
C-t	0.008520
C-A'	0.003672
d-C	0.003267
e-C	0.005858
g-d	0.013761
g-F	0.006128
h-g	0.005215
i-g	0.014429
C'-t	0.009037
e-C'	0.005341
F'-e	0.005677
i-F'	0.019922

Relative partial dispersion	
C-t/F-C	0.7817
C-A'/F-C	0.3369
d-C/F-C	0.2997
e-C/F-C	0.5374
g-d/F-C	1.2625
g-F/F-C	0.5622
h-g/F-C	0.4784
i-g/F-C	1.3238
C'-t/F'-C'	0.8202
e-C'/F'-C'	0.4848
F'-e/F'-C'	0.5152
i-F'/F'-C'	1.8081

Deviation of relative partial disp.	
$\Delta PdC$	0.0005
$\Delta PgF$	-0.0003

Internal CC (80%/5%)	
362/336	

Color Code (80%/5%)	
365/335	

CCI	
B	0.00
G	0.23
R	0.21

Thermal properties	
CTE(-30,70) [1E-7/°C]	82
CTE(100,300) [1E-7/°C]	90
Tg [°C]	511
At [°C]	581
Ht condct. [W/m·K]	0.965
Sp. heat [kJ/kg·K]	0.716
Ht diffus. [1E-6 m2/sec]	0.536

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	443 (4)
Abrasion hardness	140
Young's mod. [GPa]	65.0
Shear mod. [GPa]	26.3
Poisson's ratio	0.235
Stress optical coef. [1E-5 nm/cm/Pa]	3.25

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	0.11
350	0.44
360	0.77
370	0.923
380	0.968
390	0.984
400	0.991
420	0.993
440	0.994
460	0.994
480	0.996
500	0.996
550	0.998
600	0.997
650	0.997
700	0.998
800	0.997
900	0.996
1000	0.996
1200	0.997
1400	0.993
1600	0.989
1800	0.959
2000	0.914
2200	0.83
2400	0.77

Specific gravity	
2.51	

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

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	-0.5	-0.4	-0.3	-0.2	-0.1	0.0	0.1	0.1	0.3	0.5	0.9	1.0	1.5	2.0	2.4	
60 to 80	-0.6	-0.5	-0.4	-0.3	-0.2	-0.1	-0.1	0.0	0.1	0.3	0.7	0.8	1.3	1.8	2.2	
40 to 60	-0.8	-0.7	-0.6	-0.5	-0.4	-0.3	-0.3	-0.3	-0.1	0.1	0.5	0.5	1.0	1.5	1.9	
20 to 40	-1.0	-0.9	-0.8	-0.7	-0.6	-0.5	-0.5	-0.5	-0.3	-0.1	0.2	0.3	0.7	1.2	1.6	
0 to 20	-1.2	-1.1	-1.0	-0.9	-0.8	-0.7	-0.7	-0.7	-0.5	-0.4	0.0	0.0	0.5	0.9	1.3	
-20 to 0	-1.3	-1.3	-1.2	-1.1	-1.0	-1.0	-0.9	-0.9	-0.8	-0.6	-0.2	-0.2	0.2	0.6	1.0	
-40 to -20	-1.5	-1.5	-1.4	-1.3	-1.3	-1.2	-1.1	-1.1	-1.0	-0.8	-0.5	-0.5	-0.1	0.3	0.7	
-60 to -40	-1.7	-1.7	-1.6	-1.5	-1.5	-1.4	-1.3	-1.3	-1.2	-1.0	-0.7	-0.7	-0.4	0.0	0.4	
-70 to -60	-1.9	-1.8	-1.7	-1.7	-1.6	-1.5	-1.5	-1.5	-1.4	-1.2	-0.9	-0.9	-0.6	-0.2	0.1	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.07557274E-01
Q1	7.94538219E+01
P2	9.79586899E-03
Q2	4.86675152E-02
P3	2.93267192E-01
Q3	6.39526758E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.7	5.3
Frac. eq. (ref.)	0.5	5.9

Prod. Freq. (A to D)	C
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Similar glass type			
OHARA	S-TIL6	HOYA	E-FEL6
CDGM	H-QF6A	SCHOTT	-

2019-4-1	Transmittance
2018-4-1	Prod. Freq.
2016-4-1	Similar glass type