

# J-LAF04

$n_d = 1.757000$

$n_e = 1.760764$

$v_d = 47.86$

$v_e = 47.62$

Glass code (d)	757479
Glass code (e)	761476

Spectral l.	Refractive idx
2.058	1.72026
1.970	1.72204
1.530	1.73016
1.129	1.73733
1.064	1.73864
t	1.73973
s	1.74396
A'	1.746868
r	1.749551
C	1.752239
C'	1.752994
He-Ne	1.753699
D	1.756860
d	1.757000
e	1.760764
F	1.768055
F'	1.768969
g	1.776843
h	1.784245
0.389	1.788810
i	-

Coef. disp. form. (pwr ser.)	
A0	3.01765567E+00
A1	-1.44029325E-02
A2	-1.73403131E-04
A3	2.41938931E-02
A4	5.02913780E-04
A5	-1.18295424E-07
A6	1.26171561E-06
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.015816
F'-C'	0.015975
C-t	0.012506
C-A'	0.005371
d-C	0.004761
e-C	0.008525
g-d	0.019843
g-F	0.008788
h-g	0.007402
i-g	-
C'-t	0.013261
e-C'	0.007770
F'-e	0.008205
i-F'	-

Relative partial dispersion	
C-t/F-C	0.7907
C-A'/F-C	0.3396
d-C/F-C	0.3010
e-C/F-C	0.5390
g-d/F-C	1.2546
g-F/F-C	0.5556
h-g/F-C	0.4680
i-g/F-C	-
C'-t/F'-C'	0.8301
e-C'/F'-C'	0.4864
F'-e/F'-C'	0.5136
i-F'/F'-C'	-

Deviation of relative partial disp.	
$\Delta PdC$	0.0022
$\Delta PgF$	-0.0084

Internal CC (80%/5%)	
364/329	

Color Code (80%/5%)	
385/330	

CCI	
B	0.00
G	0.63
R	0.65

Thermal properties	
CTE(-30,70) [1E-7/°C]	54
CTE(100,300) [1E-7/°C]	68
Tg [°C]	648
At [°C]	675
Ht condct. [W/m·K]	0.844
Sp. heat [kJ/kg·K]	0.512
Ht diffus. [1E-6 m2/sec]	0.405

Chemical properties [class]	
Acid res. (surface)	4
Alkaline detergent res.	2
Climate resistance	1
Water res. (powder)	1
Acid res. (powder)	4

Mechanical properties	
Knoop hardness	645 (6)
Abrasion hardness	76
Young's mod. [GPa]	114.4
Shear mod. [GPa]	44.2
Poisson's ratio	0.295
Stress optical coef. [1E-5 nm/cm/Pa]	1.93

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	0.00
290	0.00
300	0.00
310	0.00
320	0.00
330	0.07
340	0.26
350	0.53
360	0.74
370	0.86
380	0.919
390	0.952
400	0.969
420	0.984
440	0.990
460	0.993
480	0.996
500	0.997
550	0.999
600	0.999
650	0.999
700	0.999
800	0.997
900	0.995
1000	0.995
1200	0.996
1400	0.993
1600	0.989
1800	0.978
2000	0.957
2200	0.88
2400	0.64

Specific gravity	
4.07	

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.)	4.6	4.7	4.8	5.0	5.2	5.3	5.4	5.4	5.7	5.9	6.5	6.6	7.3	-	-	
60 to 80 (ref.)	4.4	4.5	4.7	4.9	5.0	5.2	5.2	5.3	5.5	5.7	6.3	6.4	7.1	-	-	
40 to 60	4.3	4.3	4.5	4.7	4.8	5.0	5.0	5.1	5.3	5.5	6.0	6.1	6.8	-	-	
20 to 40	4.1	4.2	4.4	4.5	4.7	4.8	4.8	4.9	5.1	5.3	5.8	5.9	6.5	-	-	
0 to 20	4.0	4.1	4.3	4.4	4.5	4.7	4.7	4.7	4.9	5.1	5.6	5.7	6.3	-	-	
-20 to 0	4.0	4.0	4.2	4.3	4.5	4.6	4.6	4.7	4.8	5.0	5.5	5.5	6.1	-	-	
-40 to -20	4.0	4.1	4.2	4.3	4.4	4.6	4.6	4.6	4.8	5.0	5.4	5.5	6.0	-	-	
-60 to -40 (ref.)	4.1	4.2	4.3	4.4	4.5	4.7	4.7	4.7	4.9	5.1	5.5	5.5	6.0	-	-	
-70 to -60 (ref.)	4.3	4.3	4.5	4.6	4.7	4.8	4.8	4.9	5.0	5.2	5.6	5.6	6.1	-	-	

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	3.5	3.6	3.8	3.9	4.1	4.3	4.3	4.3	4.6	4.8	5.4	5.5	6.2	-	-	
60 to 80	3.3	3.3	3.5	3.7	3.8	4.0	4.0	4.1	4.3	4.5	5.1	5.2	5.8	-	-	
40 to 60	3.0	3.0	3.2	3.3	3.5	3.6	3.7	3.7	3.9	4.2	4.7	4.7	5.4	-	-	
20 to 40	2.6	2.7	2.9	3.0	3.1	3.3	3.3	3.4	3.5	3.8	4.3	4.3	4.9	-	-	
0 to 20	2.3	2.4	2.5	2.7	2.8	2.9	3.0	3.0	3.2	3.4	3.8	3.9	4.5	-	-	
-20 to 0	2.0	2.0	2.2	2.3	2.4	2.6	2.6	2.6	2.8	3.0	3.4	3.5	4.0	-	-	
-40 to -20	1.7	1.7	1.9	2.0	2.1	2.2	2.2	2.3	2.4	2.6	3.0	3.1	3.6	-	-	
-60 to -40	1.4	1.4	1.5	1.6	1.7	1.8	1.9	1.9	2.0	2.2	2.6	2.6	3.1	-	-	
-70 to -60	1.1	1.2	1.3	1.4	1.5	1.6	1.6	1.6	1.8	1.9	2.3	2.3	2.8	-	-	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.15921577E-01
Q1	6.78156111E+01
P2	2.43802201E-02
Q2	3.30454930E-02
P3	3.77727144E-01
Q3	5.55046977E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.5	4.0
Frac. eq. (ref.)	0.6	5.0

Prod. Freq. (A to D)	D
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Similar glass type			
OHARA	S-LAM54	HOYA	-
CDGM	H-LaF6LA	SCHOTT	-

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