

# J-LASF01

$n_d = 1.785900$

$n_e = 1.790131$

$v_d = 44.17$

$v_e = 43.92$

Glass code (d)
786442
Glass code (e)
790439

Spectral l.	Refractive idx
2.058	1.74786
1.970	1.74953
1.530	1.75730
1.129	1.76447
1.064	1.76583
t	1.76697
s	1.77148
A'	1.774649
r	1.777602
C	1.780582
C'	1.781422
He-Ne	1.782208
D	1.785743
d	1.785900
e	1.790131
F	1.798375
F'	1.799413
g	1.808383
h	1.816867
0.389	1.822124
i	1.831728

Coef. disp. form. (pwr ser.)	
A0	3.10918831E+00
A1	-1.37763126E-02
A2	-1.30545613E-04
A3	2.74334291E-02
A4	6.51189638E-04
A5	-1.58159803E-06
A6	1.87919051E-06
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.017793
F'-C'	0.017991
C-t	0.013612
C-A'	0.005933
d-C	0.005318
e-C	0.009549
g-d	0.022483
g-F	0.010008
h-g	0.008484
i-g	0.023345
C'-t	0.014452
e-C'	0.008709
F'-e	0.009282
i-F'	0.032315

Relative partial dispersion	
C-t/F-C	0.7650
C-A'/F-C	0.3334
d-C/F-C	0.2989
e-C/F-C	0.5367
g-d/F-C	1.2636
g-F/F-C	0.5625
h-g/F-C	0.4768
i-g/F-C	1.3120
C'-t/F'-C'	0.8033
e-C'/F'-C'	0.4841
F'-e/F'-C'	0.5159
i-F'/F'-C'	1.7962

Deviation of relative partial disp.	
$\Delta PdC$	0.0017
$\Delta PgF$	-0.0078

Internal CC (80%/5%)	
364/318	
Color Code (80%/5%)	
395/320	
CCI	
B	0.00
G	0.84
R	0.82

Thermal properties	
CTE(-30,70) [1E-7/°C]	59
CTE(100,300) [1E-7/°C]	76
Tg [°C]	617
At [°C]	648
StP [°C]	570
AP [°C]	599
SP [°C]	701
Ht condct. [W/m·K]	0.888
Sp. heat [kJ/kg·K]	0.539
Ht diffus. [1E-6 m2/sec]	0.388

Chemical properties [class]	
Acid res. (surface)	4
Alkaline detergent res.	3
Climate resistance	1
Water res. (powder)	1
Acid res. (powder)	4

Mechanical properties	
Knoop hardness	621 (6)
Abrasion hardness	76
Young's mod. [GPa]	111.5
Shear mod. [GPa]	42.9
Poisson's ratio	0.300
Stress optical coef. [1E-5 nm/cm/Pa]	2.11

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	-
290	-
300	-
310	-
320	0.08
330	0.25
340	0.46
350	0.63
360	0.76
370	0.85
380	0.907
390	0.941
400	0.960
420	0.978
440	0.985
460	0.990
480	0.993
500	0.996
550	0.999
600	0.998
650	0.998
700	0.998
800	0.998
900	0.998
1000	0.998
1200	0.999
1400	0.999
1600	0.994
1800	0.987
2000	0.966
2200	0.914
2400	0.71

Specific gravity
4.25

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.)	5.0	5.1	5.3	5.5	5.7	5.9	5.9	6.0	6.2	6.5	7.2	7.3	8.1	8.9	9.3	
60 to 80 (ref.)	4.8	4.9	5.2	5.3	5.5	5.7	5.7	5.8	6.0	6.3	7.0	7.1	7.9	8.7	9.1	
40 to 60	4.6	4.7	4.9	5.1	5.3	5.4	5.5	5.5	5.8	6.1	6.7	6.8	7.6	8.3	8.8	
20 to 40	4.4	4.5	4.8	4.9	5.1	5.2	5.3	5.3	5.6	5.9	6.5	6.6	7.4	8.1	8.5	
0 to 20	4.3	4.4	4.6	4.8	4.9	5.1	5.1	5.2	5.4	5.7	6.3	6.4	7.1	7.8	8.2	
-20 to 0	4.2	4.3	4.5	4.7	4.8	5.0	5.0	5.0	5.3	5.5	6.2	6.2	7.0	7.7	8.0	
-40 to -20	4.2	4.2	4.5	4.6	4.8	4.9	5.0	5.0	5.2	5.5	6.1	6.2	6.9	7.6	7.9	
-60 to -40 (ref.)	4.2	4.3	4.6	4.7	4.8	5.0	5.0	5.1	5.3	5.5	6.1	6.2	6.9	7.6	7.9	
-70 to -60 (ref.)	4.4	4.5	4.7	4.8	5.0	5.1	5.2	5.2	5.4	5.7	6.2	6.3	7.0	7.6	8.0	

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	3.9	4.0	4.3	4.4	4.6	4.8	4.8	4.9	5.1	5.4	6.1	6.2	7.0	7.7	8.2	
60 to 80	3.6	3.7	4.0	4.1	4.3	4.5	4.5	4.6	4.8	5.1	5.8	5.9	6.7	7.4	7.8	
40 to 60	3.3	3.4	3.6	3.8	3.9	4.1	4.1	4.2	4.4	4.7	5.3	5.4	6.2	6.9	7.3	
20 to 40	2.9	3.0	3.2	3.4	3.5	3.7	3.7	3.8	4.0	4.3	4.9	5.0	5.8	6.5	6.9	
0 to 20	2.5	2.6	2.8	3.0	3.1	3.3	3.3	3.4	3.6	3.9	4.5	4.6	5.3	6.0	6.4	
-20 to 0	2.2	2.2	2.5	2.6	2.8	2.9	2.9	3.0	3.2	3.5	4.1	4.1	4.9	5.5	5.9	
-40 to -20	1.8	1.9	2.1	2.2	2.4	2.5	2.6	2.6	2.8	3.1	3.6	3.7	4.4	5.0	5.4	
-60 to -40	1.4	1.5	1.7	1.9	2.0	2.1	2.2	2.2	2.4	2.6	3.2	3.3	4.0	4.6	4.9	
-70 to -60	1.1	1.2	1.4	1.6	1.7	1.8	1.9	1.9	2.1	2.3	2.9	3.0	3.6	4.2	4.6	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.11014784E-01
Q1	7.11754946E+01
P2	2.40014797E-02
Q2	3.65054964E-02
P3	3.88792918E-01
Q3	5.94406203E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.5	6.4
Frac. eq. (ref.)	0.6	7.4

Prod. Freq. (A to D)	B
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Similar glass type			
OHARA	S-LAH51	HOYA	NBFD11
CDGM	H-LaF52	SCHOTT	N-LAF33

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