

# J-LASFH15

$n_d = 1.950000$

$n_e = 1.957643$

$v_d = 29.37$

$v_e = 29.14$

Glass code (d)
950294
Glass code (e)
958291

Spectral l.	Refractive idx
2.058	1.89577
1.970	1.89747
1.530	1.90583
1.129	1.91488
1.064	1.91680
t	1.91845
s	1.92538
A'	1.930544
r	1.935504
C	1.940626
C'	1.942088
He-Ne	1.943462
D	1.949719
d	1.950000
e	1.957643
F	1.972976
F'	1.974947
g	1.992390
h	2.009607
0.389	2.020683
i	-

Partial dispersion	
F-C	0.032350
F'-C'	0.032859
C-t	0.022174
C-A'	0.010082
d-C	0.009374
e-C	0.017017
g-d	0.042390
g-F	0.019414
h-g	0.017217
i-g	-
C'-t	0.023636
e-C'	0.015555
F'-e	0.017304
i-F'	-

Relative partial dispersion	
C-t/F-C	0.6854
C-A'/F-C	0.3117
d-C/F-C	0.2898
e-C/F-C	0.5260
g-d/F-C	1.3104
g-F/F-C	0.6001
h-g/F-C	0.5322
i-g/F-C	-
C'-t/F'-C'	0.7193
e-C'/F'-C'	0.4734
F'-e/F'-C'	0.5266
i-F'/F'-C'	-

Deviation of relative partial disp.	
$\Delta PdC$	-0.0007
$\Delta PgF$	0.0050

Internal CC (80%/5%)	
409/362	
Color Code (70%/5%)	
420/365	
CCI	
B	0.00
G	5.10
R	5.32

Thermal properties	
CTE(-30,70) [1E-7/°C]	74
CTE(100,300) [1E-7/°C]	84
Tg [°C]	690
At [°C]	732
StP [°C]	644
AP [°C]	677
SP [°C]	793
Ht condct. [W/m·K]	0.858
Sp. heat [kJ/kg·K]	0.473
Ht diffus. [1E-6 m2/sec]	0.380

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	545 (5)
Abrasion hardness	112
Young's mod. [GPa]	118.1
Shear mod. [GPa]	45.4
Poisson's ratio	0.301
Stress optical coef. [1E-5 nm/cm/Pa]	1.49

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	-
290	-
300	-
310	-
320	-
330	-
340	-
350	-
360	0.04
370	0.18
380	0.41
390	0.61
400	0.73
420	0.87
440	0.927
460	0.954
480	0.971
500	0.981
550	0.994
600	0.997
650	0.998
700	0.998
800	0.998
900	0.998
1000	0.998
1200	0.999
1400	0.999
1600	0.998
1800	0.990
2000	0.978
2200	0.943
2400	0.85

Specific gravity
4.79

Coef. disp. form. (pwr ser.)	
A0	3.64640666E+00
A1	-1.51039558E-02
A2	0.00000000E+00
A3	4.80157444E-02
A4	3.49072452E-03
A5	-5.73639028E-04
A6	1.30249514E-04
A7	-1.29576789E-05
A8	5.92144355E-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.)	2.6	2.7	3.0	3.4	3.8	4.2	4.3	4.4	5.0	5.6	7.1	7.3	9.4	11.7	13.3	
60 to 80 (ref.)	2.5	2.5	2.9	3.2	3.6	4.0	4.1	4.2	4.7	5.3	6.8	7.0	9.0	11.2	12.7	
40 to 60	2.3	2.3	2.7	3.0	3.4	3.7	3.8	3.9	4.4	5.0	6.4	6.6	8.5	10.6	12.0	
20 to 40	2.1	2.1	2.5	2.8	3.1	3.5	3.6	3.7	4.1	4.7	6.0	6.2	8.0	10.0	11.3	
0 to 20	2.0	2.0	2.3	2.6	2.9	3.3	3.4	3.5	3.9	4.5	5.7	5.9	7.6	9.5	10.7	
-20 to 0	1.9	1.9	2.2	2.5	2.8	3.1	3.2	3.3	3.7	4.3	5.4	5.6	7.2	9.0	10.2	
-40 to -20	1.9	1.9	2.2	2.5	2.8	3.1	3.2	3.3	3.7	4.1	5.2	5.4	6.9	8.6	9.7	
-60 to -40 (ref.)	2.0	2.0	2.3	2.6	2.9	3.1	3.2	3.3	3.7	4.1	5.2	5.3	6.8	8.3	9.3	
-70 to -60 (ref.)	2.2	2.2	2.5	2.7	3.0	3.3	3.4	3.4	3.8	4.2	5.2	5.4	6.7	8.2	9.2	

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	1.5	1.5	1.9	2.2	2.6	3.0	3.1	3.2	3.7	4.4	5.9	6.1	8.1	10.4	12.0	
60 to 80	1.2	1.2	1.6	1.9	2.3	2.7	2.8	2.9	3.4	4.0	5.4	5.6	7.6	9.8	11.3	
40 to 60	0.8	0.9	1.2	1.5	1.9	2.2	2.3	2.4	2.9	3.5	4.9	5.0	6.9	9.0	10.4	
20 to 40	0.4	0.5	0.8	1.1	1.4	1.8	1.9	2.0	2.4	3.0	4.3	4.5	6.2	8.2	9.5	
0 to 20	0.1	0.1	0.4	0.7	1.0	1.4	1.4	1.5	2.0	2.5	3.7	3.9	5.6	7.4	8.7	
-20 to 0	-0.3	-0.3	0.0	0.3	0.6	0.9	1.0	1.1	1.5	2.0	3.1	3.3	4.9	6.6	7.8	
-40 to -20	-0.7	-0.7	-0.4	-0.1	0.2	0.5	0.5	0.6	1.0	1.5	2.5	2.7	4.2	5.8	6.9	
-60 to -40	-1.0	-1.0	-0.8	-0.5	-0.3	0.0	0.1	0.2	0.5	1.0	2.0	2.1	3.5	5.0	6.0	
-70 to -60	-1.3	-1.3	-1.1	-0.8	-0.6	-0.3	-0.2	-0.2	0.2	0.6	1.5	1.7	3.0	4.4	5.4	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.12808140E-01
Q1	8.53378336E+01
P2	2.63046433E-02
Q2	5.51236515E-02
P3	4.42143641E-01
Q3	7.63030279E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	1.2	4.0
Frac. eq. (ref.)	1.8	8.5

Prod. Freq. (A to D)	B
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Similar glass type			
OHARA	-	HOYA	-
CDGM	-	SCHOTT	-

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