

# J-LASFH16

$n_d = 2.001000$

$n_e = 2.009122$

$v_d = 29.12$

$v_e = 28.90$

Glass code (d)	001291
Glass code (e)	009289

Spectral l.	Refractive idx
2.058	1.94401
1.970	1.94574
1.530	1.95434
1.129	1.96378
1.064	1.96579
t	1.96754
s	1.97486
A'	1.980334
r	1.985599
C	1.991039
C'	1.992592
He-Ne	1.994053
D	2.000702
d	2.001000
e	2.009122
F	2.025410
F'	2.027504
g	2.046018
h	2.064272
0.389	2.075999
i	-

Coef. disp. form. (pwr ser.)	
A0	3.83294326E+00
A1	-1.56840611E-02
A2	0.00000000E+00
A3	5.28843692E-02
A4	3.50978963E-03
A5	-5.06491928E-04
A6	1.15081798E-04
A7	-1.10388704E-05
A8	5.01900181E-07

Partial dispersion	
F-C	0.034371
F'-C'	0.034912
C-t	0.023502
C-A'	0.010705
d-C	0.009961
e-C	0.018083
g-d	0.045018
g-F	0.020608
h-g	0.018254
i-g	-
C'-t	0.025055
e-C'	0.016530
F'-e	0.018382
i-F'	-

Relative partial dispersion	
C-t/F-C	0.6838
C-A'/F-C	0.3115
d-C/F-C	0.2898
e-C/F-C	0.5261
g-d/F-C	1.3098
g-F/F-C	0.5996
h-g/F-C	0.5311
i-g/F-C	-
C'-t/F'-C'	0.7177
e-C'/F'-C'	0.4735
F'-e/F'-C'	0.5265
i-F'/F'-C'	-

Deviation of relative partial disp.	
$\Delta PdC$	-0.0005
$\Delta PgF$	0.0041

Internal CC (80%/5%)	
406/361	

Color Code (70%/5%)	
425/360	

CCI	
B	0.00
G	4.96
R	5.18

Thermal properties	
CTE(-30,70) [1E-7/°C]	71
CTE(100,300) [1E-7/°C]	86
Tg [°C]	721
At [°C]	756
Ht condct. [W/m·K]	0.979
Sp. heat [kJ/kg·K]	0.437
Ht diffus. [1E-6 m2/sec]	0.439

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

Mechanical properties	
Knoop hardness	647 (6)
Abrasion hardness	53
Young's mod. [GPa]	130.3
Shear mod. [GPa]	49.8
Poisson's ratio	0.307
Stress optical coef. [1E-5 nm/cm/Pa]	0.91

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	0.00
350	0.00
360	0.04
370	0.22
380	0.46
390	0.64
400	0.76
420	0.87
440	0.924
460	0.951
480	0.967
500	0.979
550	0.994
600	0.998
650	0.998
700	0.998
800	0.998
900	0.998
1000	0.998
1200	0.998
1400	0.998
1600	0.991
1800	0.984
2000	0.972
2200	0.946
2400	0.84

Specific gravity	
5.1	

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.)	2.7	2.9	3.3	3.7	4.1	4.5	4.6	4.7	5.3	6.0	7.6	7.8	10.0	12.4	14.3	
60 to 80 (ref.)	2.6	2.7	3.1	3.5	3.9	4.3	4.4	4.5	5.0	5.7	7.3	7.5	9.5	11.9	13.7	
40 to 60	2.4	2.5	2.9	3.2	3.6	4.0	4.1	4.2	4.7	5.4	6.9	7.1	9.0	11.3	12.9	
20 to 40	2.2	2.3	2.7	3.0	3.4	3.7	3.8	4.0	4.5	5.1	6.5	6.7	8.5	10.6	12.2	
0 to 20	2.1	2.2	2.6	2.9	3.2	3.5	3.7	3.7	4.2	4.8	6.1	6.3	8.1	10.1	11.5	
-20 to 0	2.0	2.1	2.5	2.8	3.1	3.4	3.5	3.6	4.1	4.6	5.9	6.0	7.7	9.5	10.9	
-40 to -20	2.0	2.1	2.5	2.8	3.1	3.4	3.5	3.5	4.0	4.5	5.7	5.8	7.4	9.1	10.3	
-60 to -40 (ref.)	2.2	2.3	2.6	2.9	3.1	3.4	3.5	3.6	4.0	4.5	5.6	5.8	7.2	8.8	9.9	
-70 to -60 (ref.)	2.3	2.4	2.8	3.0	3.3	3.6	3.7	3.7	4.1	4.6	5.7	5.8	7.2	8.7	9.7	

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	1.6	2.1	2.5	2.8	3.2	3.4	3.5	4.0	4.8	6.3	6.5	8.7	11.1	12.9	
60 to 80	1.2	1.4	1.8	2.1	2.5	2.9	3.0	3.1	3.7	4.4	5.9	6.1	8.1	10.5	12.2	
40 to 60	0.9	1.0	1.4	1.7	2.1	2.5	2.6	2.7	3.2	3.8	5.3	5.5	7.4	9.7	11.3	
20 to 40	0.5	0.6	1.0	1.3	1.7	2.0	2.1	2.2	2.7	3.3	4.7	4.9	6.7	8.8	10.3	
0 to 20	0.1	0.2	0.6	0.9	1.2	1.6	1.7	1.8	2.2	2.8	4.1	4.3	6.0	8.0	9.4	
-20 to 0	-0.2	-0.1	0.2	0.5	0.8	1.1	1.2	1.3	1.7	2.3	3.5	3.7	5.3	7.1	8.4	
-40 to -20	-0.6	-0.5	-0.2	0.1	0.4	0.7	0.8	0.8	1.3	1.8	2.9	3.1	4.6	6.3	7.5	
-60 to -40	-1.0	-0.9	-0.6	-0.3	-0.1	0.2	0.3	0.4	0.8	1.3	2.3	2.5	3.9	5.4	6.5	
-70 to -60	-1.3	-1.2	-0.9	-0.6	-0.4	-0.1	0.0	0.0	0.4	0.9	1.9	2.0	3.3	4.8	5.8	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.08840381E-01
Q1	8.45835040E+01
P2	2.54513844E-02
Q2	5.52459928E-02
P3	4.60003603E-01
Q3	7.68666453E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	1.2	5.6
Frac. eq. (ref.)	2.0	9.1

Prod. Freq. (A to D)	A
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Similar glass type			
OHARA	-	HOYA	TAFD55
CDGM	-	SCHOTT	-

2019-4-1	Transmittance
2017-4-1	Tg,At,CTE(100,300)
2016-4-1	Similar glass type