

# J-SFS3

$n_d = 1.784700$

$n_e = 1.791740$

$v_d = 26.27$

$v_e = 26.06$

Glass code (d)
785263
Glass code (e)
792261

Spectral l.	Refractive idx
2.058	1.73526
1.970	1.73683
1.530	1.74451
1.129	1.75275
1.064	1.75448
t	1.75598
s	1.76226
A'	1.766938
r	1.771447
C	1.776116
C'	1.777451
He-Ne	1.778708
D	1.784442
d	1.784700
e	1.791740
F	1.805989
F'	1.807834
g	1.824304
h	1.840840
0.389	1.851648
i	-

Coef. disp. form. (pwr ser.)	
A0	3.05623339E+00
A1	-1.28486167E-02
A2	0.00000000E+00
A3	3.87408706E-02
A4	3.39109066E-03
A5	-6.05526065E-04
A6	1.41221664E-04
A7	-1.44464234E-05
A8	6.88155857E-07

Partial dispersion	
F-C	0.029873
F'-C'	0.030383
C-t	0.020135
C-A'	0.009178
d-C	0.008584
e-C	0.015624
g-d	0.039604
g-F	0.018315
h-g	0.016536
i-g	-
C'-t	0.021470
e-C'	0.014289
F'-e	0.016094
i-F'	-

Relative partial dispersion	
C-t/F-C	0.6740
C-A'/F-C	0.3072
d-C/F-C	0.2873
e-C/F-C	0.5230
g-d/F-C	1.3257
g-F/F-C	0.6131
h-g/F-C	0.5535
i-g/F-C	-
C'-t/F'-C'	0.7066
e-C'/F'-C'	0.4703
F'-e/F'-C'	0.5297
i-F'/F'-C'	-

Deviation of relative partial disp.	
$\Delta PdC$	-0.0017
$\Delta PgF$	0.0128

Internal CC (80%/5%)	
399/363	

Color Code (80%/5%)	
435/365	

CCI	
B	0.00
G	3.37
R	3.45

Thermal properties	
CTE(-30,70) [1E-7/°C]	84
CTE(100,300) [1E-7/°C]	104
Tg [°C]	581
At [°C]	626
Ht condct. [W/m·K]	1.080
Sp. heat [kJ/kg·K]	0.630
Ht diffus. [1E-6 m2/sec]	0.415

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

Mechanical properties	
Knoop hardness	492 (5)
Abrasion hardness	196
Young's mod. [GPa]	92.8
Shear mod. [GPa]	37.0
Poisson's ratio	0.256
Stress optical coef. [1E-5 nm/cm/Pa]	3.03

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	0.02
370	0.17
380	0.44
390	0.68
400	0.81
420	0.922
440	0.957
460	0.970
480	0.978
500	0.985
550	0.994
600	0.995
650	0.994
700	0.996
800	0.996
900	0.996
1000	0.996
1200	0.996
1400	0.993
1600	0.988
1800	0.976
2000	0.967
2200	0.933
2400	0.89

Specific gravity	
3.28	

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.)	0.1	0.2	0.6	0.8	1.1	1.4	1.5	1.6	2.1	2.8	4.3	4.5	6.4	8.9	11.0	
60 to 80 (ref.)	-0.1	0.1	0.5	0.7	1.0	1.3	1.4	1.5	2.0	2.6	4.0	4.2	6.0	8.4	10.4	
40 to 60	-0.2	0.0	0.3	0.5	0.8	1.1	1.1	1.2	1.7	2.3	3.6	3.8	5.6	7.8	9.7	
20 to 40	-0.3	-0.1	0.2	0.4	0.6	0.9	1.0	1.1	1.5	2.1	3.3	3.5	5.1	7.2	9.0	
0 to 20	-0.4	-0.2	0.1	0.3	0.5	0.7	0.8	0.9	1.3	1.9	3.1	3.2	4.7	6.6	8.3	
-20 to 0	-0.4	-0.2	0.1	0.2	0.4	0.7	0.7	0.8	1.2	1.7	2.8	3.0	4.4	6.2	7.7	
-40 to -20	-0.4	-0.2	0.1	0.2	0.4	0.7	0.7	0.8	1.2	1.7	2.7	2.8	4.1	5.8	7.1	
-60 to -40 (ref.)	-0.2	-0.1	0.2	0.4	0.5	0.7	0.8	0.9	1.2	1.7	2.7	2.8	4.0	5.4	6.7	
-70 to -60 (ref.)	0.0	0.1	0.4	0.5	0.7	0.9	1.0	1.0	1.4	1.8	2.7	2.8	3.9	5.3	6.5	

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	-1.0	-0.8	-0.5	-0.2	0.0	0.3	0.4	0.5	1.0	1.7	3.1	3.3	5.2	7.7	9.8	
60 to 80	-1.2	-1.1	-0.7	-0.5	-0.2	0.1	0.2	0.2	0.7	1.4	2.8	2.9	4.8	7.1	9.1	
40 to 60	-1.5	-1.4	-1.0	-0.8	-0.6	-0.3	-0.2	-0.1	0.3	0.9	2.2	2.4	4.1	6.3	8.2	
20 to 40	-1.8	-1.7	-1.3	-1.2	-0.9	-0.7	-0.6	-0.5	-0.1	0.5	1.7	1.9	3.5	5.6	7.3	
0 to 20	-2.1	-2.0	-1.7	-1.5	-1.3	-1.0	-0.9	-0.9	-0.5	0.1	1.2	1.4	2.9	4.8	6.4	
-20 to 0	-2.4	-2.3	-2.0	-1.8	-1.6	-1.4	-1.3	-1.2	-0.9	-0.3	0.7	0.9	2.2	4.0	5.5	
-40 to -20	-2.7	-2.6	-2.3	-2.1	-2.0	-1.8	-1.7	-1.6	-1.2	-0.8	0.2	0.4	1.6	3.2	4.6	
-60 to -40	-3.0	-2.9	-2.6	-2.5	-2.3	-2.1	-2.0	-2.0	-1.6	-1.2	-0.3	-0.2	1.0	2.4	3.7	
-70 to -60	-3.2	-3.1	-2.8	-2.7	-2.6	-2.4	-2.3	-2.3	-1.9	-1.5	-0.7	-0.5	0.5	1.8	3.0	

Coef. disp. form. (frac. eq.) (ref.)	
P1	9.33352719E-02
Q1	6.79499207E+01
P2	2.66834997E-02
Q2	6.09673098E-02
P3	3.79672929E-01
Q3	8.70602218E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	1.1	10.3
Frac. eq. (ref.)	2.0	18.0
Prod. Freq. (A to D)	C	

Similar glass type			
OHARA	S-TIH23	HOYA	-
CDGM	-	SCHOTT	-

2019-4-1	Transmittance
2015-4-1	Color Code, Prod. Freq, Similar glass type
2011-2-1	Similar glass type