

# J-SF6

$n_d = 1.805180$

$n_e = 1.812633$

$v_d = 25.45$

$v_e = 25.24$

Glass code (d)
805255
Glass code (e)
813252

Spectral l.	Refractive idx
2.058	1.75397
1.970	1.75551
1.530	1.76319
1.129	1.77161
1.064	1.77341
t	1.77497
s	1.78153
A'	1.786439
r	1.791185
C	1.796109
C'	1.797519
He-Ne	1.798846
D	1.804907
d	1.805180
e	1.812633
F	1.827749
F'	1.829709
g	1.847229
h	1.864867
0.389	1.876421
i	-

Partial dispersion	
F-C	0.031640
F'-C'	0.032190
C-t	0.021142
C-A'	0.009670
d-C	0.009071
e-C	0.016524
g-d	0.042049
g-F	0.019480
h-g	0.017638
i-g	-
C'-t	0.022552
e-C'	0.015114
F'-e	0.017076
i-F'	-

Relative partial dispersion	
C-t/F-C	0.6682
C-A'/F-C	0.3056
d-C/F-C	0.2867
e-C/F-C	0.5223
g-d/F-C	1.3290
g-F/F-C	0.6157
h-g/F-C	0.5575
i-g/F-C	-
C'-t/F'-C'	0.7006
e-C'/F'-C'	0.4695
F'-e/F'-C'	0.5305
i-F'/F'-C'	-

Deviation of relative partial disp.	
$\Delta PdC$	-0.0020
$\Delta PgF$	0.0140

Internal CC (80%/5%)	
398/363	
Color Code (80%/5%)	
440/365	
CCI	
B	0.00
G	3.24
R	3.41

Thermal properties	
CTE(-30,70) [1E-7/°C]	86
CTE(100,300) [1E-7/°C]	110
Tg [°C]	571
At [°C]	611
StP [°C]	524
AP [°C]	558
SP [°C]	679
Ht condct. [W/m·K]	1.070
Sp. heat [kJ/kg·K]	0.662
Ht diffus. [1E-6 m2/sec]	0.484

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	482 (5)
Abrasion hardness	182
Young's mod. [GPa]	92.9
Shear mod. [GPa]	36.7
Poisson's ratio	0.264
Stress optical coef. [1E-5 nm/cm/Pa]	2.95

Internal trans. (10mm)		
$\lambda$ [nm]	$\tau$	
280	-	
290	-	
300	-	
310	-	
320	-	
330	-	
340	-	
350	-	
360	-	
370	0.20	
380	0.50	
390	0.71	
400	0.82	
420	0.918	
440	0.954	
460	0.971	
480	0.980	
500	0.984	
550	0.991	
600	0.994	
650	0.995	
700	0.996	
800	0.995	
900	0.995	
1000	0.996	
1200	0.998	
1400	0.999	
1600	0.990	
1800	0.975	
2000	0.966	
2200	0.936	
2400	0.89	

Specific gravity	
3.34	

Coef. disp. form. (pwr ser.)	
A0	3.11993645E+00
A1	-1.26679163E-02
A2	0.00000000E+00
A3	4.21698355E-02
A4	3.04768926E-03
A5	-4.20720196E-04
A6	1.06770582E-04
A7	-1.09382035E-05
A8	5.57077794E-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.)	-0.7	-0.6	-0.3	0.0	0.3	0.7	0.8	0.9	1.4	2.1	3.6	3.8	5.9	8.5	10.7	
60 to 80 (ref.)	-0.9	-0.7	-0.4	-0.1	0.2	0.5	0.6	0.7	1.2	1.9	3.3	3.5	5.5	8.1	10.2	
40 to 60	-1.0	-0.9	-0.5	-0.3	0.0	0.3	0.4	0.5	1.0	1.6	3.0	3.2	5.1	7.5	9.4	
20 to 40	-1.1	-1.0	-0.7	-0.4	-0.1	0.2	0.3	0.4	0.8	1.4	2.7	2.9	4.7	6.9	8.7	
0 to 20	-1.2	-1.0	-0.7	-0.5	-0.3	0.0	0.1	0.2	0.7	1.2	2.5	2.6	4.3	6.4	8.1	
-20 to 0	-1.2	-1.1	-0.8	-0.5	-0.3	0.0	0.1	0.1	0.6	1.1	2.3	2.4	4.0	5.9	7.5	
-40 to -20	-1.1	-1.0	-0.7	-0.5	-0.3	0.0	0.1	0.1	0.5	1.0	2.1	2.3	3.7	5.5	7.0	
-60 to -40 (ref.)	-0.9	-0.8	-0.6	-0.4	-0.2	0.1	0.2	0.2	0.6	1.1	2.1	2.2	3.6	5.2	6.6	
-70 to -60 (ref.)	-0.7	-0.6	-0.4	-0.2	0.0	0.3	0.3	0.4	0.8	1.2	2.2	2.3	3.6	5.1	6.3	

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	-1.8	-1.7	-1.4	-1.1	-0.8	-0.4	-0.3	-0.2	0.3	1.0	2.5	2.7	4.7	7.4	9.5	
60 to 80	-2.1	-1.9	-1.6	-1.3	-1.0	-0.7	-0.6	-0.5	0.0	0.7	2.1	2.3	4.3	6.8	8.9	
40 to 60	-2.3	-2.2	-1.9	-1.6	-1.4	-1.0	-0.9	-0.9	-0.4	0.2	1.6	1.8	3.7	6.0	8.0	
20 to 40	-2.6	-2.5	-2.2	-2.0	-1.7	-1.4	-1.3	-1.2	-0.8	-0.2	1.1	1.3	3.0	5.2	7.1	
0 to 20	-2.9	-2.8	-2.5	-2.3	-2.0	-1.7	-1.7	-1.6	-1.1	-0.6	0.6	0.8	2.4	4.5	6.2	
-20 to 0	-3.2	-3.1	-2.8	-2.6	-2.4	-2.1	-2.0	-1.9	-1.5	-1.0	0.1	0.3	1.8	3.7	5.3	
-40 to -20	-3.5	-3.4	-3.1	-2.9	-2.6	-2.5	-2.4	-2.3	-1.9	-1.4	-0.4	-0.2	1.2	2.9	4.4	
-60 to -40	-3.8	-3.7	-3.4	-3.2	-3.0	-2.8	-2.7	-2.7	-2.3	-1.8	-0.9	-0.7	0.6	2.2	3.5	
-70 to -60	-4.0	-3.9	-3.7	-3.5	-3.3	-3.1	-3.0	-2.9	-2.6	-2.2	-1.2	-1.1	0.1	1.6	2.8	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.01435791E-01
Q1	7.59148418E+01
P2	2.72714884E-02
Q2	6.17300189E-02
P3	3.86525039E-01
Q3	8.91225912E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.9	3.7
Frac. eq. (ref.)	3.3	11.4

Prod. Freq. (A to D)	A
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Similar glass type			
OHARA	S-TIH6	HOYA	FD60
CDGM	H-ZF7LA	SCHOTT	N-SF6

2022-7-1	StP, AP, SP
2019-4-1	Transmittance
2018-4-1	Young's mod., Shear mod.