

# J-KZFH4

$n_d = 1.552981$

$n_e = 1.555374$

$v_d = 55.07$

$v_e = 54.85$

Glass code (d)	553551
Glass code (e)	555549

Spectral l.	Refractive idx
2.058	1.52623
1.970	1.52769
1.530	1.53428
1.129	1.53978
1.064	1.54074
t	1.54152
s	1.54445
A'	1.546406
r	1.548174
C	1.549923
C'	1.550410
He-Ne	1.550865
D	1.552892
d	1.552981
e	1.555374
F	1.559964
F'	1.560536
g	1.565433
h	1.569990
0.389	1.572780
i	1.577811

Coef. disp. form. (pwr ser.)	
A0	2.37404487E+00
A1	-1.07631771E-02
A2	-1.28642692E-04
A3	1.35709369E-02
A4	2.55765647E-04
A5	-2.23388334E-06
A6	4.91067955E-07
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.010041
F'-C'	0.010126
C-t	0.008404
C-A'	0.003517
d-C	0.003058
e-C	0.005451
g-d	0.012452
g-F	0.005469
h-g	0.004557
i-g	0.012378
C'-t	0.008891
e-C'	0.004964
F'-e	0.005162
i-F'	0.017275

Relative partial dispersion	
C-t/F-C	0.8370
C-A'/F-C	0.3503
d-C/F-C	0.3046
e-C/F-C	0.5429
g-d/F-C	1.2401
g-F/F-C	0.5447
h-g/F-C	0.4538
i-g/F-C	1.2327
C'-t/F'-C'	0.8780
e-C'/F'-C'	0.4902
F'-e/F'-C'	0.5098
i-F'/F'-C'	1.7060

Deviation of relative partial disp.	
$\Delta PdC$	0.0025
$\Delta PgF$	-0.0073

Specific gravity	2.62
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Thermal properties	
CTE(-30,70) [1E-7/°C]	48
CTE(100,300) [1E-7/°C]	63
Tg [°C]	544
At [°C]	594
Ht condct. [W/m·K]	0.934
Sp. heat [kJ/kg·K]	0.737
Ht diffus. [1E-6 m2/sec]	0.484

Chemical properties [class]	
Acid res. (surface)	2
Alkaline detergent res.	3
Climate resistance	2
Water res. (powder)	1
Acid res. (powder)	3

Mechanical properties	
Knoop hardness	409 (4)
Abrasion hardness	67
Young's mod. [GPa]	66.4
Shear mod. [GPa]	26.0
Poisson's ratio	0.275
Stress optical coef. [1E-5 nm/cm/Pa]	3.60

Color Code (80%/5%)	350/300
Internal CC	335/299
Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	-
290	-
300	0.08
310	0.35
320	0.59
330	0.74
340	0.84
350	0.906
360	0.943
365	0.955
370	0.965
380	0.979
390	0.985
400	0.990
420	0.993
440	0.995
460	0.995
480	0.996
500	0.997
550	0.996
600	0.996
650	0.995
700	0.994
800	0.991
900	0.997
1000	0.996
1200	0.998
1400	0.976
1600	0.985
1800	0.975
2000	0.945
2200	0.81
2400	0.59

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.)	4.9	4.9	5.0	5.2	5.3	5.4	5.4	5.5	5.6	5.8	6.1	6.1	6.5	6.9	7.2
60 to 80 (ref.)	4.8	4.8	4.9	5.0	5.1	5.3	5.3	5.3	5.5	5.6	5.9	6.0	6.4	6.7	7.0
40 to 60	4.7	4.7	4.8	4.9	5.0	5.1	5.1	5.2	5.3	5.4	5.7	5.8	6.2	6.5	6.7
20 to 40	4.6	4.6	4.7	4.8	4.9	5.0	5.0	5.0	5.1	5.3	5.6	5.6	6.0	6.3	6.5
0 to 20	4.5	4.5	4.6	4.7	4.8	4.9	4.9	4.9	5.0	5.2	5.4	5.5	5.8	6.1	6.3
-20 to 0	4.5	4.5	4.5	4.6	4.7	4.8	4.8	4.9	5.0	5.1	5.4	5.4	5.7	6.0	6.2
-40 to -20	4.5	4.5	4.6	4.7	4.7	4.8	4.9	4.9	5.0	5.1	5.4	5.4	5.7	6.0	6.1
-60 to -40 (ref.)	4.6	4.6	4.7	4.8	4.8	4.9	5.0	5.0	5.1	5.2	5.4	5.5	5.7	6.0	6.1
-70 to -60 (ref.)	4.8	4.8	4.8	4.9	5.0	5.1	5.1	5.1	5.2	5.3	5.6	5.6	5.9	6.1	6.2

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	4.0	4.0	4.1	4.2	4.3	4.4	4.5	4.5	4.6	4.8	5.1	5.2	5.6	5.9	6.2
60 to 80	3.8	3.8	3.9	4.0	4.1	4.2	4.2	4.3	4.4	4.6	4.9	4.9	5.3	5.7	5.9
40 to 60	3.5	3.5	3.6	3.7	3.8	3.9	3.9	4.0	4.1	4.2	4.5	4.6	4.9	5.3	5.5
20 to 40	3.2	3.2	3.3	3.4	3.5	3.6	3.6	3.7	3.8	3.9	4.2	4.2	4.6	4.9	5.1
0 to 20	3.0	3.0	3.0	3.1	3.2	3.3	3.3	3.4	3.5	3.6	3.9	3.9	4.2	4.5	4.7
-20 to 0	2.7	2.7	2.8	2.9	2.9	3.0	3.1	3.1	3.2	3.3	3.5	3.6	3.9	4.2	4.3
-40 to -20	2.4	2.4	2.5	2.6	2.7	2.7	2.8	2.8	2.9	3.0	3.2	3.2	3.5	3.8	3.9
-60 to -40	2.2	2.2	2.2	2.3	2.4	2.4	2.5	2.5	2.6	2.7	2.9	2.9	3.2	3.4	3.6
-70 to -60	2.0	1.9	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.6	2.7	2.9	3.1	3.3

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.10309099E-01
Q1	6.59547831E+01
P2	3.47235922E-02
Q2	2.40152655E-02
P3	2.79391962E-01
Q3	4.71244161E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.4	4.0
Frac. eq. (ref.)	0.6	6.1

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

2016-4-1	1st edition
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