

# J-KZFH9

 $n_d = 1.738000$ 
 $n_e = 1.743413$ 
 $v_d = 32.26$ 
 $v_e = 32.04$ 

Glass code (d)
738323
Glass code (e)
743320

Spectral l.	Refractive idx
2.058	1.69481
1.970	1.69647
1.530	1.70434
1.129	1.71208
1.064	1.71361
t	1.71491
s	1.72020
A'	1.724010
r	1.727619
C	1.731309
C'	1.732358
He-Ne	1.733341
D	1.737801
d	1.738000
e	1.743413
F	1.754185
F'	1.755563
g	1.767673
h	1.779490
0.389	1.787012
i	1.801209

Coef. disp. form. (pwr ser.)	
A0	2.92190512E+00
A1	-1.31913454E-02
A2	-7.94286252E-05
A3	3.27997049E-02
A4	7.00950165E-04
A5	1.24169090E-04
A6	-1.12359582E-05
A7	9.11052912E-07
A8	-

Partial dispersion	
F-C	0.022876
F'-C'	0.023205
C-t	0.016396
C-A'	0.007299
d-C	0.006691
e-C	0.012104
g-d	0.029673
g-F	0.013488
h-g	0.011817
i-g	0.033536
C'-t	0.017445
e-C'	0.011055
F'-e	0.012150
i-F'	0.045646

Relative partial dispersion	
C-t/F-C	0.7167
C-A'/F-C	0.3191
d-C/F-C	0.2925
e-C/F-C	0.5291
g-d/F-C	1.2971
g-F/F-C	0.5896
h-g/F-C	0.5166
i-g/F-C	1.4660
C'-t/F'-C'	0.7518
e-C'/F'-C'	0.4764
F'-e/F'-C'	0.5236
i-F'/F'-C'	1.9671

Deviation of relative partial disp.	
$\Delta PdC$	0.0007
$\Delta PgF$	-0.0006

Internal CC (80%/5%)	
358/330	
Color Code (80%/5%)	
385/330	
CCI	
B	0.00
G	0.80
R	0.86

Thermal properties	
CTE(-30,70) [1E-7/°C]	70
CTE(100,300) [1E-7/°C]	94
Tg [°C]	517
At [°C]	561
StP [°C]	-
AP [°C]	-
SP [°C]	-
Ht condct. [W/m·K]	1.060
Sp. heat [kJ/kg·K]	0.719
Ht diffus. [1E-6 m2/sec]	0.462

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	609 (6)
Abrasion hardness	128
Young's mod. [GPa]	99.9
Shear mod. [GPa]	39.8
Poisson's ratio	0.256
Stress optical coef. [1E-5 nm/cm/Pa]	3.55

Internal trans. (10mm)		
$\lambda$ [nm]	$\tau$	
280	-	
290	-	
300	-	
310	-	
320	-	
330	0.05	
340	0.35	
350	0.67	
360	0.82	
370	0.89	
380	0.926	
390	0.947	
400	0.962	
420	0.977	
440	0.984	
460	0.988	
480	0.991	
500	0.993	
550	0.998	
600	0.998	
650	0.999	
700	0.999	
800	0.999	
900	0.999	
1000	0.999	
1200	0.999	
1400	0.995	
1600	0.995	
1800	0.986	
2000	0.975	
2200	0.927	
2400	0.86	

Specific gravity
3.19

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.)	3.4	3.5	3.8	4.0	4.3	4.6	4.6	4.7	5.1	5.5	6.5	6.7	8.0	9.4	10.4	
60 to 80 (ref.)	3.3	3.4	3.7	3.9	4.1	4.4	4.4	4.5	4.9	5.3	6.3	6.4	7.6	9.0	10.0	
40 to 60	3.1	3.2	3.4	3.6	3.9	4.1	4.2	4.3	4.6	5.0	5.9	6.0	7.2	8.5	9.4	
20 to 40	2.9	3.0	3.2	3.5	3.7	3.9	4.0	4.0	4.4	4.7	5.6	5.7	6.8	8.1	8.9	
0 to 20	2.8	2.9	3.1	3.3	3.5	3.7	3.8	3.9	4.2	4.5	5.3	5.4	6.5	7.6	8.4	
-20 to 0	2.7	2.8	3.0	3.2	3.4	3.6	3.7	3.7	4.0	4.4	5.1	5.2	6.2	7.3	8.0	
-40 to -20	2.7	2.8	3.0	3.2	3.4	3.6	3.6	3.7	3.9	4.3	5.0	5.1	6.0	7.0	7.7	
-60 to -40 (ref.)	2.8	2.9	3.1	3.3	3.4	3.6	3.7	3.7	4.0	4.3	4.9	5.0	5.9	6.8	7.4	
-70 to -60 (ref.)	3.0	3.1	3.2	3.4	3.6	3.7	3.8	3.8	4.1	4.4	5.0	5.1	5.9	6.7	7.3	

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	2.4	2.5	2.7	3.0	3.2	3.5	3.6	3.6	4.0	4.4	5.4	5.6	6.8	8.3	9.3	
60 to 80	2.1	2.2	2.5	2.7	2.9	3.2	3.3	3.3	3.7	4.1	5.1	5.2	6.4	7.8	8.7	
40 to 60	1.8	1.9	2.1	2.3	2.5	2.8	2.9	2.9	3.3	3.7	4.6	4.7	5.8	7.1	8.0	
20 to 40	1.5	1.5	1.8	2.0	2.2	2.4	2.5	2.5	2.8	3.2	4.1	4.2	5.3	6.5	7.3	
0 to 20	1.1	1.2	1.4	1.6	1.8	2.0	2.1	2.1	2.4	2.8	3.6	3.7	4.7	5.8	6.6	
-20 to 0	0.8	0.8	1.1	1.2	1.4	1.6	1.7	1.7	2.0	2.3	3.1	3.2	4.1	5.2	5.9	
-40 to -20	0.4	0.5	0.7	0.9	1.0	1.2	1.3	1.3	1.6	1.9	2.6	2.7	3.6	4.5	5.2	
-60 to -40	0.1	0.2	0.3	0.5	0.7	0.8	0.9	0.9	1.2	1.5	2.1	2.2	3.0	3.9	4.5	
-70 to -60	-0.1	-0.1	0.1	0.2	0.4	0.5	0.6	0.6	0.9	1.1	1.7	1.8	2.6	3.4	4.0	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.47480163E-01
Q1	9.14659513E+01
P2	2.74082006E-02
Q2	5.00590165E-02
P3	3.63073654E-01
Q3	7.34787952E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.9	7.1
Frac. eq. (ref.)	3.1	7.6

Prod. Freq. (A to D)	-
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Similar glass type			
OHARA	S-NBH53V	HOYA	-
CDGM	-	SCHOTT	-

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2020-4-1	1st edition