

# J-KZFH7

 $n_d = 1.732110$ 
 $n_e = 1.735883$ 
 $v_d = 46.18$ 
 $v_e = 45.93$ 

Glass code (d)
732462
Glass code (e)
736459

Spectral l.	Refractive idx
2.058	1.69859
1.970	1.70002
1.530	1.70671
1.129	1.71299
1.064	1.71419
t	1.71520
s	1.71922
A'	1.722051
r	1.724693
C	1.727358
C'	1.728109
He-Ne	1.728812
D	1.731970
d	1.732110
e	1.735883
F	1.743210
F'	1.744130
g	1.752052
h	1.759489
0.389	1.764068
i	1.772368

Coef. disp. form. (pwr ser.)	
A0	2.92982429E+00
A1	-1.15064058E-02
A2	-9.01320677E-05
A3	2.42192502E-02
A4	4.84339860E-04
A5	3.92109984E-06
A6	7.18628425E-07
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.015852
F'-C'	0.016021
C-t	0.012156
C-A'	0.005307
d-C	0.004752
e-C	0.008525
g-d	0.019942
g-F	0.008842
h-g	0.007437
i-g	0.020316
C'-t	0.012907
e-C'	0.007774
F'-e	0.008247
i-F'	0.028238

Relative partial dispersion	
C-t/F-C	0.7668
C-A'/F-C	0.3348
d-C/F-C	0.2998
e-C/F-C	0.5378
g-d/F-C	1.2580
g-F/F-C	0.5578
h-g/F-C	0.4692
i-g/F-C	1.2816
C'-t/F'-C'	0.8056
e-C'/F'-C'	0.4852
F'-e/F'-C'	0.5148
i-F'/F'-C'	1.7626

Deviation of relative partial disp.	
$\Delta PdC$	0.0017
$\Delta PgF$	-0.0091

Internal CC (80%/5%)	
335/290	
Color Code (80%/5%)	
365/290	
CCI	
B	0.00
G	0.39
R	0.39

Thermal properties	
CTE(-30,70) [1E-7/°C]	65
CTE(100,300) [1E-7/°C]	89
Tg [°C]	508
At [°C]	563
StP [°C]	475
AP [°C]	507
SP [°C]	631
Ht condct. [W/m·K]	0.868
Sp. heat [kJ/kg·K]	0.575
Ht diffus. [1E-6 m2/sec]	0.371

Chemical properties [class]	
Acid res. (surface)	4
Alkaline detergent res.	2
Climate resistance	1
Water res. (powder)	1
Acid res. (powder)	3

Mechanical properties	
Knoop hardness	580 (6)
Abrasion hardness	96
Young's mod. [GPa]	107.3
Shear mod. [GPa]	41.6
Poisson's ratio	0.290
Stress optical coef. [1E-5 nm/cm/Pa]	2.52

Internal trans. (10mm)		
$\lambda$ [nm]	$\tau$	
280	0.04	
290	0.07	
300	0.24	
310	0.46	
320	0.64	
330	0.76	
340	0.85	
350	0.902	
360	0.938	
370	0.960	
380	0.972	
390	0.979	
400	0.983	
420	0.987	
440	0.990	
460	0.993	
480	0.995	
500	0.995	
550	0.998	
600	0.998	
650	0.998	
700	0.998	
800	0.999	
900	0.998	
1000	0.998	
1200	0.997	
1400	0.995	
1600	0.995	
1800	0.987	
2000	0.972	
2200	0.944	
2400	0.82	

Specific gravity	
4.07	

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.)	5.3	5.4	5.6	5.9	6.1	6.3	6.4	6.4	6.7	7.0	7.7	7.7	8.5	9.3	9.8		
60 to 80 (ref.)	5.2	5.3	5.6	5.8	6.0	6.2	6.2	6.3	6.5	6.8	7.5	7.6	8.3	9.1	9.6		
40 to 60	5.1	5.2	5.4	5.6	5.8	6.0	6.0	6.1	6.4	6.7	7.3	7.3	8.1	8.8	9.3		
20 to 40	5.0	5.0	5.3	5.5	5.7	5.9	5.9	6.0	6.2	6.5	7.1	7.2	7.8	8.5	9.0		
0 to 20	4.9	5.0	5.2	5.4	5.6	5.8	5.8	5.9	6.1	6.4	6.9	7.0	7.7	8.3	8.8		
-20 to 0	4.9	5.0	5.2	5.4	5.5	5.7	5.8	5.8	6.0	6.3	6.8	6.9	7.5	8.2	8.6		
-40 to -20	5.0	5.0	5.2	5.4	5.6	5.8	5.8	5.8	6.1	6.3	6.8	6.9	7.5	8.1	8.5		
-60 to -40 (ref.)	5.1	5.2	5.4	5.6	5.7	5.9	5.9	6.0	6.2	6.4	6.9	7.0	7.5	8.1	8.5		
-70 to -60 (ref.)	5.3	5.4	5.6	5.7	5.9	6.1	6.1	6.1	6.3	6.6	7.1	7.1	7.7	8.2	8.6		

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	4.3	4.3	4.6	4.8	5.0	5.2	5.3	5.3	5.6	5.9	6.6	6.6	7.4	8.2	8.7		
60 to 80	4.1	4.1	4.4	4.6	4.8	5.0	5.0	5.1	5.4	5.7	6.3	6.4	7.1	7.9	8.4		
40 to 60	3.8	3.9	4.1	4.3	4.5	4.7	4.7	4.8	5.0	5.3	5.9	6.0	6.7	7.4	7.9		
20 to 40	3.5	3.6	3.8	4.0	4.2	4.4	4.4	4.5	4.7	5.0	5.5	5.6	6.3	7.0	7.4		
0 to 20	3.2	3.3	3.5	3.7	3.9	4.0	4.1	4.1	4.4	4.6	5.2	5.2	5.9	6.5	7.0		
-20 to 0	2.9	3.0	3.2	3.4	3.6	3.7	3.8	3.8	4.0	4.3	4.8	4.9	5.5	6.1	6.5		
-40 to -20	2.7	2.7	2.9	3.1	3.3	3.4	3.5	3.5	3.7	4.0	4.4	4.5	5.1	5.7	6.1		
-60 to -40	2.4	2.4	2.6	2.8	2.9	3.1	3.1	3.2	3.4	3.6	4.1	4.1	4.7	5.2	5.6		
-70 to -60	2.2	2.2	2.4	2.6	2.7	2.9	2.9	2.9	3.1	3.4	3.8	3.9	4.4	4.9	5.3		

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.34679629E-01
Q1	9.52571480E+01
P2	5.85653677E-02
Q2	2.35306968E-02
P3	3.32892041E-01
Q3	4.88022239E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.6	7.8
Frac. eq. (ref.)	0.7	6.8

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

2022-7-1	StP, AP, SP
2019-4-1	Transmittance
2018-9-1	1st edition