

# J-BAF3

 $n_d = 1.582670$ 
 $n_e = 1.585648$ 
 $v_d = 46.48$ 
 $v_e = 46.19$ 

Glass code (d)
583465
Glass code (e)
586462

Spectral l.	Refractive idx
2.058	1.55565
1.970	1.55686
1.530	1.56243
1.129	1.56755
1.064	1.56851
t	1.56932
s	1.57252
A'	1.574752
r	1.576832
C	1.578929
C'	1.579520
He-Ne	1.580073
D	1.582559
d	1.582670
e	1.585648
F	1.591464
F'	1.592198
g	1.598562
h	1.604624
0.389	1.608407
i	1.615393

Coef. disp. form. (pwr ser.)	
A0	2.45448839E+00
A1	-8.67148963E-03
A2	-1.04715240E-04
A3	1.76039752E-02
A4	1.54610243E-04
A5	5.59918259E-05
A6	-5.01297284E-06
A7	3.17557990E-07
A8	0.00000000E+00

Partial dispersion	
F-C	0.012535
F'-C'	0.012678
C-t	0.009605
C-A'	0.004177
d-C	0.003741
e-C	0.006719
g-d	0.015892
g-F	0.007098
h-g	0.006062
i-g	0.016831
C'-t	0.010196
e-C'	0.006128
F'-e	0.006550
i-F'	0.023195

Relative partial dispersion	
C-t/F-C	0.7663
C-A'/F-C	0.3332
d-C/F-C	0.2984
e-C/F-C	0.5360
g-d/F-C	1.2678
g-F/F-C	0.5663
h-g/F-C	0.4836
i-g/F-C	1.3427
C'-t/F'-C'	0.8042
e-C'/F'-C'	0.4834
F'-e/F'-C'	0.5166
i-F'/F'-C'	1.8295

Deviation of relative partial disp.	
$\Delta PdC$	0.0003
$\Delta PgF$	-0.0001

Internal CC (80%/5%)	
369/343	
Color Code (80%/5%)	
375/345	
CCI	
B	-
G	-
R	-

Thermal properties	
CTE(-30,70) [1E-7/°C]	85
CTE(100,300) [1E-7/°C]	98
Tg [°C]	558
At [°C]	612
StP [°C]	509
AP [°C]	547
SP [°C]	700
Ht condct. [W/m·K]	1.097
Sp. heat [kJ/kg·K]	0.723
Ht diffus. [1E-6 m2/sec]	0.554

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	483 (5)
Abrasion hardness	134
Young's mod. [GPa]	76.0
Shear mod. [GPa]	30.6
Poisson's ratio	0.244
Stress optical coef. [1E-5 nm/cm/Pa]	2.54

Internal trans. (10mm)		
$\lambda$ [nm]	$\tau$	
280	-	
290	-	
300	-	
310	-	
320	-	
330	0.01	
340	0.03	
350	0.19	
360	0.58	
370	0.82	
380	0.917	
390	0.960	
400	0.977	
420	0.989	
440	0.991	
460	0.992	
480	0.994	
500	0.994	
550	0.996	
600	0.994	
650	0.993	
700	0.993	
800	0.996	
900	0.998	
1000	0.998	
1200	0.999	
1400	0.992	
1600	0.989	
1800	0.968	
2000	0.946	
2200	0.88	
2400	0.83	

Specific gravity	
2.74	

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.)	0.6	0.6	0.8	1.0	1.1	1.2	1.3	1.3	1.5	1.7	2.2	2.3	2.9	3.5	4.0	
60 to 80 (ref.)	0.5	0.6	0.8	0.9	1.0	1.1	1.2	1.2	1.4	1.6	2.1	2.2	2.7	3.4	3.8	
40 to 60	0.4	0.5	0.6	0.8	0.9	1.0	1.1	1.1	1.3	1.5	1.9	2.0	2.6	3.2	3.6	
20 to 40	0.3	0.4	0.5	0.7	0.8	0.9	1.0	1.0	1.2	1.4	1.8	1.9	2.4	3.0	3.4	
0 to 20	0.3	0.3	0.5	0.6	0.7	0.9	0.9	0.9	1.1	1.3	1.7	1.8	2.3	2.8	3.2	
-20 to 0	0.3	0.4	0.5	0.6	0.7	0.8	0.9	0.9	1.1	1.3	1.7	1.7	2.2	2.8	3.1	
-40 to -20	0.4	0.4	0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.3	1.7	1.7	2.2	2.7	3.1	
-60 to -40 (ref.)	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.1	1.2	1.4	1.8	1.8	2.3	2.8	3.1	
-70 to -60 (ref.)	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.4	1.6	1.9	2.0	2.4	2.9	3.3	

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	-0.4	-0.3	-0.1	0.0	0.1	0.3	0.3	0.3	0.5	0.8	1.2	1.3	1.9	2.5	3.0	
60 to 80	-0.5	-0.5	-0.3	-0.2	-0.1	0.1	0.1	0.1	0.3	0.5	1.0	1.1	1.6	2.3	2.7	
40 to 60	-0.8	-0.7	-0.6	-0.4	-0.3	-0.2	-0.2	-0.1	0.1	0.3	0.7	0.8	1.3	1.9	2.3	
20 to 40	-1.0	-1.0	-0.8	-0.7	-0.6	-0.5	-0.4	-0.4	-0.2	0.0	0.4	0.5	1.0	1.6	2.0	
0 to 20	-1.3	-1.2	-1.1	-0.9	-0.8	-0.7	-0.7	-0.7	-0.5	-0.3	0.1	0.2	0.7	1.2	1.6	
-20 to 0	-1.5	-1.4	-1.3	-1.2	-1.1	-1.0	-0.9	-0.9	-0.8	-0.6	-0.2	-0.2	0.3	0.9	1.2	
-40 to -20	-1.7	-1.7	-1.6	-1.4	-1.3	-1.2	-1.2	-1.2	-1.0	-0.9	-0.5	-0.5	0.0	0.5	0.9	
-60 to -40	-2.0	-1.9	-1.8	-1.7	-1.6	-1.5	-1.5	-1.4	-1.3	-1.1	-0.8	-0.8	-0.3	0.2	0.5	
-70 to -60	-2.1	-2.1	-2.0	-1.9	-1.8	-1.7	-1.7	-1.6	-1.5	-1.4	-1.0	-1.0	-0.6	-0.1	0.2	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.15657985E-01
Q1	8.68803305E+01
P2	9.88427417E-03
Q2	5.11274577E-02
P3	3.16699166E-01
Q3	6.63914300E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.6	7.9
Frac. eq. (ref.)	0.8	6.7

Prod. Freq. (A to D)	D
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Similar glass type			
OHARA	-	HOYA	-
CDGM	H-BaF4	SCHOTT	-

2022-7-1	StP, AP, SP, Prod. Freq.
2020-4-1	Similar glass type
2019-4-1	Transmittance