

J-BAF4

$n_d = 1.605620$

$n_e = 1.608924$

$v_d = 43.49$

$v_e = 43.20$

Glass code (d)
606435
Glass code (e)
609432

Spectral l.	Refractive idx
2.058	1.57560
1.970	1.57696
1.530	1.58321
1.129	1.58891
1.064	1.58998
t	1.59088
s	1.59440
A'	1.596870
r	1.599166
C	1.601481
C'	1.602134
He-Ne	1.602745
D	1.605498
d	1.605620
e	1.608924
F	1.615408
F'	1.616230
g	1.623384
h	1.630262
0.389	1.634595
i	1.642691

Coef. disp. form. (pwr ser.)	
A0	2.52175840E+00
A1	-9.79498428E-03
A2	-1.34973275E-04
A3	1.97297837E-02
A4	7.13034071E-05
A5	1.03716753E-04
A6	-1.06452623E-05
A7	6.63899530E-07
A8	0.00000000E+00

Partial dispersion	
F-C	0.013927
F'-C'	0.014096
C-t	0.010604
C-A'	0.004611
d-C	0.004139
e-C	0.007443
g-d	0.017764
g-F	0.007976
h-g	0.006878
i-g	0.019307
C'-t	0.011257
e-C'	0.006790
F'-e	0.007306
i-F'	0.026461

Relative partial dispersion	
C-t/F-C	0.7614
C-A'/F-C	0.3311
d-C/F-C	0.2972
e-C/F-C	0.5344
g-d/F-C	1.2755
g-F/F-C	0.5727
h-g/F-C	0.4939
i-g/F-C	1.3863
C'-t/F'-C'	0.7986
e-C'/F'-C'	0.4817
F'-e/F'-C'	0.5183
i-F'/F'-C'	1.8772

Deviation of relative partial disp.	
ΔPdC	0.0004
ΔPgF	0.0013

Internal CC (80%/5%)	
377/352	
Color Code (80%/5%)	
390/350	
CCI	
B	-
G	-
R	-

Thermal properties	
CTE(-30,70) [1E-7/°C]	62
CTE(100,300) [1E-7/°C]	76
Tg [°C]	598
At [°C]	651
StP [°C]	-
AP [°C]	-
SP [°C]	-
Ht condct. [W/m·K]	1.058
Sp. heat [kJ/kg·K]	0.697
Ht diffus. [1E-6 m2/sec]	0.525

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	108
Young's mod. [GPa]	84.6
Shear mod. [GPa]	34.2
Poisson's ratio	0.236
Stress optical coef. [1E-5 nm/cm/Pa]	3.11

Internal trans. (10mm)		
λ [nm]	τ	
280	-	
290	-	
300	-	
310	-	
320	-	
330	-	
340	-	
350	0.02	
360	0.29	
370	0.66	
380	0.84	
390	0.916	
400	0.950	
420	0.973	
440	0.978	
460	0.983	
480	0.986	
500	0.989	
550	0.992	
600	0.993	
650	0.992	
700	0.992	
800	0.994	
900	0.996	
1000	0.996	
1200	0.997	
1400	0.982	
1600	0.990	
1800	0.982	
2000	0.971	
2200	0.901	
2400	0.87	

Specific gravity
2.89

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.)	4.2	4.3	4.5	4.7	4.8	5.0	5.0	5.1	5.3	5.6	6.2	6.3	7.0	7.8	8.4	
60 to 80 (ref.)	4.1	4.2	4.4	4.5	4.7	4.8	4.9	4.9	5.1	5.4	6.0	6.1	6.8	7.6	8.1	
40 to 60	3.9	4.0	4.2	4.3	4.5	4.7	4.7	4.7	4.9	5.2	5.7	5.8	6.5	7.3	7.8	
20 to 40	3.8	3.9	4.1	4.2	4.3	4.5	4.5	4.6	4.8	5.0	5.5	5.6	6.3	7.0	7.5	
0 to 20	3.7	3.8	4.0	4.1	4.2	4.4	4.4	4.4	4.6	4.9	5.4	5.4	6.0	6.7	7.2	
-20 to 0	3.7	3.7	3.9	4.0	4.2	4.3	4.3	4.4	4.5	4.8	5.2	5.3	5.9	6.5	7.0	
-40 to -20	3.7	3.7	3.9	4.0	4.2	4.3	4.3	4.4	4.5	4.7	5.2	5.2	5.8	6.4	6.9	
-60 to -40 (ref.)	3.8	3.9	4.0	4.1	4.2	4.4	4.4	4.4	4.6	4.8	5.2	5.3	5.8	6.4	6.8	
-70 to -60 (ref.)	4.0	4.0	4.2	4.3	4.4	4.5	4.5	4.6	4.7	4.9	5.3	5.4	5.9	6.5	6.9	

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	3.3	3.3	3.5	3.7	3.8	4.0	4.0	4.1	4.3	4.6	5.2	5.2	6.0	6.8	7.3	
60 to 80	3.0	3.1	3.3	3.4	3.6	3.8	3.8	3.8	4.1	4.3	4.9	4.9	5.7	6.4	7.0	
40 to 60	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.5	3.7	4.0	4.5	4.6	5.2	6.0	6.5	
20 to 40	2.4	2.5	2.7	2.8	3.0	3.1	3.1	3.2	3.4	3.6	4.1	4.2	4.8	5.5	6.0	
0 to 20	2.2	2.2	2.4	2.5	2.6	2.8	2.8	2.9	3.0	3.3	3.7	3.8	4.4	5.1	5.6	
-20 to 0	1.9	1.9	2.1	2.2	2.3	2.4	2.5	2.5	2.7	2.9	3.3	3.4	4.0	4.6	5.1	
-40 to -20	1.6	1.6	1.8	1.9	2.0	2.1	2.2	2.2	2.3	2.5	3.0	3.0	3.6	4.2	4.6	
-60 to -40	1.3	1.3	1.5	1.6	1.7	1.8	1.8	1.9	2.0	2.2	2.6	2.6	3.1	3.7	4.1	
-70 to -60	1.1	1.1	1.2	1.3	1.4	1.5	1.6	1.6	1.8	1.9	2.3	2.4	2.8	3.4	3.8	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.10004273E-01
Q1	7.52194401E+01
P2	9.42216527E-03
Q2	5.73632071E-02
P3	3.27207024E-01
Q3	6.92180568E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.7	8.9
Frac. eq. (ref.)	1.5	8.6

Prod. Freq. (A to D)	D
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Similar glass type			
OHARA	S-BAM4	HOYA	-
CDGM	H-BaF5	SCHOTT	N-BAF4

2019-4-1	Transmittance
2018-4-1	Prod. Freq.
2015-4-1	Color Code, Similar glass type