

# J-BAF12

$n_d = 1.639300$

$n_e = 1.642685$

$v_d = 44.83$

$v_e = 44.54$

Glass code (d)
639448
Glass code (e)
643445

Spectral l.	Refractive idx
2.058	1.60880
1.970	1.61017
1.530	1.61644
1.129	1.62220
1.064	1.62329
t	1.62420
s	1.62780
A'	1.630326
r	1.632680
C	1.635055
C'	1.635725
He-Ne	1.636352
D	1.639174
d	1.639300
e	1.642685
F	1.649314
F'	1.650153
g	1.657437
h	1.664407
0.389	1.668777
i	1.676892

Coef. disp. form. (pwr ser.)	
A0	2.62810335E+00
A1	-9.95087731E-03
A2	-1.44740792E-04
A3	2.06473464E-02
A4	1.62531777E-04
A5	7.85240289E-05
A6	-7.45350927E-06
A7	4.83617341E-07
A8	0.00000000E+00

Partial dispersion	
F-C	0.014259
F'-C'	0.014428
C-t	0.010856
C-A'	0.004729
d-C	0.004245
e-C	0.007630
g-d	0.018137
g-F	0.008123
h-g	0.006970
i-g	0.019455
C'-t	0.011526
e-C'	0.006960
F'-e	0.007468
i-F'	0.026739

Relative partial dispersion	
C-t/F-C	0.7613
C-A'/F-C	0.3317
d-C/F-C	0.2977
e-C/F-C	0.5351
g-d/F-C	1.2720
g-F/F-C	0.5697
h-g/F-C	0.4888
i-g/F-C	1.3644
C'-t/F'-C'	0.7989
e-C'/F'-C'	0.4824
F'-e/F'-C'	0.5176
i-F'/F'-C'	1.8533

Deviation of relative partial disp.	
$\Delta PdC$	0.0003
$\Delta PgF$	0.0005

Internal CC (80%/5%)	
377/346	

Color Code (80%/5%)	
390/345	

CCI	
B	0.00
G	1.02
R	1.06

Thermal properties	
CTE(-30,70) [1E-7/°C]	67
CTE(100,300) [1E-7/°C]	81
Tg [°C]	583
At [°C]	632
Ht condct. [W/m·K]	0.856
Sp. heat [kJ/kg·K]	0.586
Ht diffus. [1E-6 m2/sec]	0.453

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

Mechanical properties	
Knoop hardness	535 (5)
Abrasion hardness	144
Young's mod. [GPa]	98.2
Shear mod. [GPa]	38.8
Poisson's ratio	0.265
Stress optical coef. [1E-5 nm/cm/Pa]	2.73

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	0.00
290	0.00
300	0.00
310	0.00
320	0.00
330	0.00
340	0.01
350	0.11
360	0.39
370	0.67
380	0.83
390	0.909
400	0.947
420	0.976
440	0.985
460	0.989
480	0.992
500	0.995
550	0.997
600	0.997
650	0.998
700	0.998
800	0.998
900	0.999
1000	0.999
1200	0.998
1400	0.990
1600	0.990
1800	0.981
2000	0.968
2200	0.906
2400	0.81

Specific gravity	
3.23	

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.)	3.2	3.3	3.4	3.6	3.8	4.0	4.0	4.1	4.3	4.6	5.2	5.3	6.0	6.6	6.9
60 to 80 (ref.)	3.1	3.1	3.3	3.5	3.6	3.8	3.9	3.9	4.1	4.4	5.0	5.1	5.8	6.4	6.6
40 to 60	3.0	3.0	3.2	3.3	3.5	3.6	3.7	3.7	3.9	4.2	4.8	4.8	5.5	6.1	6.3
20 to 40	2.8	2.9	3.0	3.2	3.3	3.5	3.5	3.6	3.8	4.0	4.6	4.6	5.3	5.8	6.0
0 to 20	2.8	2.8	2.9	3.1	3.2	3.4	3.4	3.5	3.7	3.9	4.4	4.5	5.1	5.6	5.8
-20 to 0	2.7	2.7	2.9	3.0	3.2	3.3	3.4	3.4	3.6	3.8	4.3	4.4	4.9	5.4	5.6
-40 to -20	2.8	2.8	2.9	3.0	3.2	3.3	3.4	3.4	3.6	3.8	4.2	4.3	4.9	5.3	5.5
-60 to -40 (ref.)	2.9	2.9	3.0	3.2	3.3	3.4	3.5	3.5	3.7	3.9	4.3	4.4	4.9	5.3	5.5
-70 to -60 (ref.)	3.0	3.1	3.2	3.3	3.4	3.6	3.6	3.6	3.8	4.0	4.4	4.5	5.0	5.4	5.5

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	2.2	2.3	2.4	2.6	2.8	3.0	3.0	3.0	3.3	3.5	4.1	4.2	4.9	5.5	5.8
60 to 80	2.0	2.0	2.2	2.4	2.5	2.7	2.8	2.8	3.0	3.3	3.9	3.9	4.6	5.2	5.5
40 to 60	1.7	1.8	1.9	2.1	2.2	2.4	2.4	2.5	2.7	2.9	3.5	3.6	4.2	4.8	5.0
20 to 40	1.4	1.5	1.6	1.8	1.9	2.1	2.1	2.2	2.3	2.6	3.1	3.2	3.8	4.3	4.5
0 to 20	1.2	1.2	1.3	1.5	1.6	1.7	1.8	1.8	2.0	2.2	2.7	2.8	3.4	3.9	4.1
-20 to 0	0.9	0.9	1.0	1.2	1.3	1.4	1.5	1.5	1.7	1.9	2.4	2.4	3.0	3.5	3.6
-40 to -20	0.6	0.6	0.7	0.8	1.0	1.1	1.1	1.2	1.3	1.5	2.0	2.1	2.6	3.0	3.3
-60 to -40	0.3	0.3	0.4	0.5	0.7	0.8	0.8	0.9	1.0	1.2	1.6	1.7	2.2	2.6	2.7
-70 to -60	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.6	0.8	0.9	1.3	1.4	1.9	2.3	2.4

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.01418564E-01
Q1	7.16266791E+01
P2	9.76853251E-03
Q2	5.44636973E-02
P3	3.42089890E-01
Q3	6.70566733E-03

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.4	11.4
Frac. eq. (ref.)	0.9	10.4

Prod. Freq. (A to D)	D
----------------------	---

Similar glass type			
OHARA	S-BAM12	HOYA	-
CDGM	-	SCHOTT	-

2019-4-1	Transmittance, CTE(100,300)
2018-4-1	Prod. Freq.
2015-4-1	Color Code, Prod. Freq.