

Q-FK01AS

$n_d = 1.496530$

$n_e = 1.497983$

$v_d = 81.60$

$v_e = 81.21$

Glass code (d)	497816
Glass code (e)	498812

Spectral l.	Refractive idx
2.058	1.48134
1.970	1.48210
1.530	1.48558
1.129	1.48863
1.064	1.48918
t	1.48963
s	1.49136
A'	1.492538
r	1.493608
C	1.494670
C'	1.494967
He-Ne	1.495243
D	1.496476
d	1.496530
e	1.497983
F	1.500755
F'	1.501099
g	1.504024
h	1.506715
0.389	1.508346
i	1.511254

Coef. disp. form. (pwr ser.)	
A0	2.21653488E+00
A1	-5.54625268E-03
A2	-3.61726027E-05
A3	8.33951250E-03
A4	1.02472408E-04
A5	-1.61216982E-06
A6	1.29777392E-07
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.006085
F'-C'	0.006132
C-t	0.005039
C-A'	0.002132
d-C	0.001860
e-C	0.003313
g-d	0.007494
g-F	0.003269
h-g	0.002691
i-g	0.007230
C'-t	0.005336
e-C'	0.003016
F'-e	0.003116
i-F'	0.010155

Relative partial dispersion	
C-t/F-C	0.8281
C-A'/F-C	0.3504
d-C/F-C	0.3057
e-C/F-C	0.5445
g-d/F-C	1.2316
g-F/F-C	0.5372
h-g/F-C	0.4422
i-g/F-C	1.1882
C'-t/F'-C'	0.8702
e-C'/F'-C'	0.4918
F'-e/F'-C'	0.5082
i-F'/F'-C'	1.6561

Deviation of relative partial disp.	
ΔPdC	-0.0084
ΔPgF	0.0298

Internal CC (80%/5%)	
330/282	

Color Code (80%/5%)	
335/285	

CCI	
B	0.00
G	0.11
R	0.04

Thermal properties	
CTE(-30,70) [1E-7/°C]	120
CTE(100,300) [1E-7/°C]	146
Tg [°C]	459
At [°C]	490
Ht condct. [W/m·K]	0.770
Sp. heat [kJ/kg·K]	0.658
diffus. [1E-6 m2/sec]	0.322

Chemical properties [class]	
Acid res. (surface)	5
Alkaline detergent res.	4
Climate resistance	1
Water res. (powder)	1
Acid res. (powder)	3

Mechanical properties	
Knoop hardness	344 (3)
Abrasion hardness	447
Young's mod. [GPa]	71.6
Shear mod. [GPa]	27.6
Poisson's ratio	0.297
Stress optical coef. [1E-5 nm/cm/Pa]	0.81

Internal trans. (10mm)	
λ [nm]	τ
280	0.04
290	0.11
300	0.24
310	0.44
320	0.65
330	0.80
340	0.902
350	0.953
360	0.978
370	0.990
380	0.995
390	0.997
400	0.997
420	0.996
440	0.996
460	0.997
480	0.998
500	0.999
550	0.999
600	0.998
650	0.997
700	0.999
800	0.999
900	0.999
1000	0.999
1200	0.999
1400	0.999
1600	0.998
1800	0.999
2000	0.999
2200	0.999
2400	0.998

Specific gravity	
3.65	

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.)	-6.4	-6.4	-6.4	-6.3	-6.2	-6.2	-6.2	-6.1	-6.1	-6.0	-5.8	-5.8	-5.7	-5.5	-5.4	
60 to 80(ref.)	-6.3	-6.3	-6.2	-6.1	-6.1	-6.0	-6.0	-6.0	-5.9	-5.9	-5.7	-5.7	-5.5	-5.3	-5.3	
40 to 60	-6.1	-6.0	-5.9	-5.9	-5.8	-5.8	-5.8	-5.8	-5.7	-5.6	-5.5	-5.5	-5.3	-5.1	-5.0	
20 to 40	-5.8	-5.8	-5.7	-5.6	-5.6	-5.6	-5.5	-5.5	-5.5	-5.4	-5.3	-5.2	-5.1	-4.9	-4.8	
0 to 20	-5.5	-5.5	-5.4	-5.4	-5.3	-5.3	-5.3	-5.2	-5.2	-5.1	-5.0	-5.0	-4.8	-4.6	-4.5	
-20 to 0	-5.2	-5.1	-5.1	-5.0	-5.0	-4.9	-4.9	-4.9	-4.9	-4.8	-4.7	-4.6	-4.5	-4.3	-4.2	
-40 to -20	-4.8	-4.8	-4.7	-4.6	-4.6	-4.6	-4.5	-4.5	-4.5	-4.4	-4.3	-4.3	-4.1	-3.9	-3.9	
-60 to -40(ref.)	-4.3	-4.3	-4.2	-4.2	-4.1	-4.1	-4.1	-4.1	-4.0	-3.9	-3.8	-3.8	-3.6	-3.5	-3.4	
-70 to -60(ref.)	-3.9	-3.8	-3.8	-3.7	-3.7	-3.7	-3.6	-3.6	-3.6	-3.5	-3.4	-3.4	-3.2	-3.1	-3.0	

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	-7.4	-7.3	-7.3	-7.2	-7.1	-7.1	-7.1	-7.1	-7.0	-6.9	-6.8	-6.8	-6.6	-6.4	-6.4	
60 to 80	-7.3	-7.3	-7.2	-7.1	-7.1	-7.0	-7.0	-7.0	-6.9	-6.9	-6.7	-6.7	-6.6	-6.4	-6.3	
40 to 60	-7.2	-7.2	-7.1	-7.0	-7.0	-6.9	-6.9	-6.9	-6.8	-6.8	-6.7	-6.6	-6.4	-6.2	-6.2	
20~40	-7.1	-7.1	-7.0	-6.9	-6.9	-6.9	-6.8	-6.8	-6.8	-6.7	-6.6	-6.6	-6.4	-6.2	-6.2	
0 to 20	-7.0	-7.0	-6.9	-6.8	-6.8	-6.8	-6.7	-6.7	-6.7	-6.6	-6.5	-6.5	-6.3	-6.2	-6.1	
-20 to 0	-6.9	-6.9	-6.8	-6.7	-6.7	-6.7	-6.7	-6.6	-6.6	-6.5	-6.4	-6.4	-6.2	-6.1	-6.0	
-40 to -20	-6.8	-6.8	-6.7	-6.7	-6.6	-6.6	-6.6	-6.6	-6.5	-6.5	-6.3	-6.3	-6.2	-6.0	-5.9	
-60 to -40	-6.7	-6.7	-6.6	-6.6	-6.5	-6.5	-6.5	-6.5	-6.4	-6.4	-6.3	-6.2	-6.1	-6.0	-5.9	
-70 to -60	-6.6	-6.6	-6.5	-6.5	-6.5	-6.4	-6.4	-6.4	-6.4	-6.3	-6.2	-6.2	-6.0	-5.9	-5.8	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.25044570E-01
Q1	1.33505878E+02
P2	5.86958669E-03
Q2	-2.83028591E-02
P3	2.82649760E-01
Q3	5.57104558E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.4	4.3
Frac. eq. (ref.)	1.1	4.3

Prod. Freq. (A to D)	A
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Similar glass type			
OHARA	-	HOYA	-
C.D.G.M	-	SCHOTT	-

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2019-4-1	Transmittance
2018-4-1	1st edition