

Q-FKH2S

$n_d = 1.455620$

$n_e = 1.456812$

$v_d = 91.31$

$v_e = 90.89$

Glass code (d)	456913
Glass code (e)	457909

Spectral l.	Refractive idx
2.058	1.44294
1.970	1.44357
1.530	1.44649
1.129	1.44906
1.064	1.44952
t	1.44990
s	1.45135
A'	1.452324
r	1.453212
C	1.454089
C'	1.454334
He-Ne	1.454561
D	1.455575
d	1.455620
e	1.456812
F	1.459079
F'	1.459360
g	1.461745
h	1.463935
0.389	1.465261
i	1.467620

Coef. disp. form. (pwr ser.)	
A0	2.10025148E+00
A1	-4.58689757E-03
A2	-2.09903123E-05
A3	6.85727645E-03
A4	2.32345667E-05
A5	4.89859472E-06
A6	-1.82336191E-07
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.004990
F'-C'	0.005026
C-t	0.004189
C-A'	0.001765
d-C	0.001531
e-C	0.002723
g-d	0.006125
g-F	0.002666
h-g	0.002190
i-g	0.005875
C'-t	0.004434
e-C'	0.002478
F'-e	0.002548
i-F'	0.008260

Relative partial dispersion	
C-t/F-C	0.8395
C-A'/F-C	0.3537
d-C/F-C	0.3068
e-C/F-C	0.5457
g-d/F-C	1.2275
g-F/F-C	0.5343
h-g/F-C	0.4389
i-g/F-C	1.1774
C'-t/F'-C'	0.8822
e-C'/F'-C'	0.4930
F'-e/F'-C'	0.5070
i-F'/F'-C'	1.6435

Deviation of relative partial disp.	
ΔPdC	-0.0116
ΔPgF	0.0431

Internal CC (80%/5%)	
341/299	
Color Code (80%/5%)	
345/300	
CCI	
B	0.00
G	0.19
R	0.13

Thermal properties	
CTE(-30,70) [1E-7/°C]	134
CTE(100,300) [1E-7/°C]	160
Tg [°C]	454
At [°C]	482
StP [°C]	410
AP [°C]	437
SP [°C]	530
Ht condct. [W/m·K]	0.868
Sp. heat [kJ/kg·K]	0.684
Ht diffus. [1E-6 m2/sec]	0.345

Chemical properties [class]	
Acid res. (surface)	7
Alkaline detergent res.	4
Climate resistance	1
Water res. (powder)	1
Acid res. (powder)	3

Mechanical properties	
Knoop hardness	335 (3)
Abrasion hardness	404
Young's mod. [GPa]	71.4
Shear mod. [GPa]	27.3
Poisson's ratio	0.305
Stress optical coef. [1E-5 nm/cm/Pa]	0.82

Internal trans. (10mm)	
λ [nm]	τ
280	-
290	-
300	0.06
310	0.18
320	0.39
330	0.61
340	0.79
350	0.89
360	0.949
370	0.976
380	0.988
390	0.993
400	0.995
420	0.994
440	0.994
460	0.996
480	0.996
500	0.998
550	0.999
600	0.998
650	0.997
700	0.998
800	0.996
900	0.994
1000	0.994
1200	0.995
1400	0.994
1600	0.994
1800	0.991
2000	0.995
2200	0.994
2400	0.998

Specific gravity	
3.67	

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.)	-6.9	-6.9	-6.9	-6.8	-6.8	-6.7	-6.7	-6.7	-6.6	-6.5	-6.4	-6.4	-6.3	-6.1	-6.0	
60 to 80(ref.)	-6.8	-6.7	-6.7	-6.6	-6.6	-6.5	-6.5	-6.5	-6.5	-6.4	-6.3	-6.3	-6.1	-6.0	-5.9	
40 to 60	-6.5	-6.5	-6.5	-6.4	-6.4	-6.3	-6.3	-6.3	-6.2	-6.2	-6.1	-6.0	-5.9	-5.8	-5.7	
20 to 40	-6.3	-6.3	-6.2	-6.2	-6.1	-6.1	-6.1	-6.0	-6.0	-5.9	-5.8	-5.8	-5.7	-5.5	-5.4	
0 to 20	-6.0	-6.0	-5.9	-5.9	-5.8	-5.8	-5.8	-5.8	-5.7	-5.7	-5.5	-5.5	-5.4	-5.3	-5.2	
-20 to 0	-5.6	-5.6	-5.6	-5.5	-5.5	-5.5	-5.4	-5.4	-5.4	-5.3	-5.2	-5.2	-5.1	-4.9	-4.9	
-40 to -20	-5.2	-5.2	-5.2	-5.1	-5.1	-5.1	-5.1	-5.0	-5.0	-4.9	-4.8	-4.8	-4.7	-4.6	-4.5	
-60 to -40(ref.)	-4.8	-4.7	-4.7	-4.7	-4.6	-4.6	-4.6	-4.6	-4.5	-4.5	-4.4	-4.4	-4.2	-4.1	-4.0	
-70 to -60(ref.)	-4.3	-4.3	-4.3	-4.2	-4.2	-4.2	-4.2	-4.2	-4.1	-4.1	-3.9	-3.9	-3.8	-3.7	-3.6	

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	-7.8	-7.8	-7.7	-7.7	-7.7	-7.6	-7.6	-7.6	-7.5	-7.5	-7.3	-7.3	-7.2	-7.0	-7.0	
60 to 80	-7.7	-7.7	-7.7	-7.6	-7.6	-7.5	-7.5	-7.5	-7.5	-7.4	-7.3	-7.3	-7.1	-7.0	-6.9	
40 to 60	-7.6	-7.6	-7.6	-7.5	-7.5	-7.4	-7.4	-7.4	-7.4	-7.3	-7.2	-7.2	-7.0	-6.9	-6.8	
20~40	-7.5	-7.5	-7.5	-7.4	-7.4	-7.3	-7.3	-7.3	-7.3	-7.2	-7.1	-7.1	-7.0	-6.8	-6.7	
0 to 20	-7.4	-7.4	-7.3	-7.3	-7.3	-7.2	-7.2	-7.2	-7.2	-7.1	-7.0	-7.0	-6.9	-6.8	-6.7	
-20 to 0	-7.3	-7.3	-7.2	-7.2	-7.2	-7.1	-7.1	-7.1	-7.1	-7.0	-6.9	-6.9	-6.8	-6.7	-6.6	
-40 to -20	-7.2	-7.2	-7.1	-7.1	-7.1	-7.0	-7.0	-7.0	-7.0	-6.9	-6.8	-6.8	-6.7	-6.6	-6.5	
-60 to -40	-7.1	-7.1	-7.0	-7.0	-7.0	-6.9	-6.9	-6.9	-6.9	-6.8	-6.7	-6.7	-6.6	-6.5	-6.4	
-70 to -60	-7.0	-7.0	-7.0	-6.9	-6.9	-6.9	-6.9	-6.9	-6.8	-6.8	-6.7	-6.7	-6.6	-6.5	-6.4	

Coef. disp. form. (frac. eq.) (ref.)	
P1	-
Q1	-
P2	-
Q2	-
P3	-
Q3	-

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.3	9.5
Frac. eq. (ref.)	-	-

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

2020-4-1	StP, AP, SP
2019-4-1	Transmittance
2018-4-1	Prod. Freq