

Q-SK55S

$n_d = 1.588870$

$n_e = 1.591168$

$v_d = 61.14$

$v_e = 60.91$

Glass code (d)	589611
Glass code (e)	591609

Spectral l.	Refractive idx
2.058	1.56288
1.970	1.56430
1.530	1.57068
1.129	1.57605
1.064	1.57698
t	1.57774
s	1.58061
A'	1.582509
r	1.584226
C	1.585920
C'	1.586391
He-Ne	1.586830
D	1.588784
d	1.588870
e	1.591168
F	1.595552
F'	1.596097
g	1.600738
h	1.605028
0.389	1.607639
i	1.612315

Coef. disp. form. (pwr ser.)	
A0	2.48678163E+00
A1	-1.06945057E-02
A2	-1.21587496E-04
A3	1.38678388E-02
A4	1.28599548E-04
A5	8.04132494E-06
A6	-1.64917822E-07
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.009632
F'-C'	0.009706
C-t	0.008177
C-A'	0.003411
d-C	0.002950
e-C	0.005248
g-d	0.011868
g-F	0.005186
h-g	0.004290
i-g	0.011577
C'-t	0.008648
e-C'	0.004777
F'-e	0.004929
i-F'	0.016218

Relative partial dispersion	
C-t/F-C	0.8489
C-A'/F-C	0.3541
d-C/F-C	0.3063
e-C/F-C	0.5449
g-d/F-C	1.2321
g-F/F-C	0.5384
h-g/F-C	0.4454
i-g/F-C	1.2019
C'-t/F'-C'	0.8910
e-C'/F'-C'	0.4922
F'-e/F'-C'	0.5078
i-F'/F'-C'	1.6709

Deviation of relative partial disp.	
ΔPdC	0.0015
ΔPgF	-0.0034

Internal CC (80%/5%)	
327/273	

Color Code (80%/5%)	
340/275	

CCI	
B	0.00
G	0.17
R	0.15

Thermal properties	
CTE(-30,70) [1E-7/°C]	66
CTE(100,300) [1E-7/°C]	87
Tg [°C]	520
At [°C]	556
Ht condct. [W/m·K]	0.891
Sp. heat [kJ/kg·K]	0.601
diffus. [1E-6 m2/sec]	0.503

Chemical properties [class]	
Acid res. (surface)	6
Alkaline detergent res.	3
Climate resistance	5
Water res. (powder)	2
Acid res. (powder)	4

Mechanical properties	
Knoop hardness	589 (6)
Abrasion hardness	99
Young's mod. [GPa]	97.1
Shear mod. [GPa]	39.2
Poisson's ratio	0.240
Stress optical coef. [1E-5 nm/cm/Pa]	2.33

Internal trans. (10mm)	
λ [nm]	τ
280	0.08
290	0.18
300	0.35
310	0.55
320	0.72
330	0.83
340	0.906
350	0.949
360	0.972
370	0.984
380	0.990
390	0.993
400	0.994
420	0.994
440	0.994
460	0.995
480	0.997
500	0.998
550	0.998
600	0.998
650	0.998
700	0.998
800	0.998
900	0.999
1000	0.999
1200	0.999
1400	0.996
1600	0.996
1800	0.990
2000	0.980
2200	0.935
2400	0.84

Specific gravity	
2.95	

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	3.3	3.5	3.6	3.7	3.7	3.8	3.9	4.0	4.4	4.4	4.8	5.2	5.3
60 to 80(ref.)	3.1	3.2	3.3	3.4	3.5	3.6	3.6	3.7	3.8	3.9	4.2	4.3	4.7	5.0	5.2
40 to 60	3.1	3.1	3.2	3.3	3.4	3.5	3.5	3.6	3.7	3.8	4.1	4.2	4.5	4.9	5.0
20 to 40	3.0	3.0	3.1	3.2	3.3	3.4	3.5	3.5	3.6	3.7	4.0	4.1	4.4	4.7	4.9
0 to 20	3.0	3.0	3.1	3.2	3.3	3.4	3.4	3.4	3.6	3.7	4.0	4.0	4.3	4.6	4.8
-20 to 0	3.0	3.0	3.1	3.2	3.3	3.4	3.4	3.5	3.6	3.7	3.9	4.0	4.3	4.6	4.7
-40 to -20	3.1	3.1	3.2	3.3	3.4	3.5	3.5	3.5	3.6	3.7	4.0	4.0	4.3	4.6	4.8
-60 to -40(ref.)	3.3	3.3	3.4	3.5	3.6	3.7	3.7	3.7	3.8	3.9	4.1	4.2	4.5	4.7	4.9
-70 to -60(ref.)	3.5	3.5	3.6	3.7	3.8	3.9	3.9	3.9	4.0	4.1	4.3	4.4	4.6	4.9	5.0

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	2.2	2.3	2.4	2.5	2.6	2.7	2.7	2.8	2.9	3.0	3.4	3.4	3.8	4.1	4.3
60 to 80	2.1	2.1	2.2	2.3	2.4	2.5	2.6	2.6	2.7	2.9	3.2	3.2	3.6	3.9	4.1
40 to 60	1.9	1.9	2.0	2.1	2.2	2.3	2.3	2.3	2.5	2.6	2.9	2.9	3.3	3.6	3.8
20~40	1.6	1.7	1.8	1.9	2.0	2.1	2.1	2.1	2.2	2.3	2.6	2.7	3.0	3.3	3.5
0 to 20	1.4	1.4	1.6	1.6	1.7	1.8	1.8	1.9	2.0	2.1	2.3	2.4	2.7	3.0	3.2
-20 to 0	1.2	1.2	1.3	1.4	1.5	1.6	1.6	1.6	1.7	1.8	2.1	2.1	2.4	2.7	2.8
-40 to -20	1.0	1.0	1.1	1.2	1.3	1.3	1.4	1.4	1.5	1.6	1.8	1.8	2.1	2.4	2.5
-60 to -40	0.8	0.8	0.9	1.0	1.0	1.1	1.1	1.1	1.2	1.3	1.5	1.6	1.8	2.1	2.2
-70 to -60	0.6	0.6	0.7	0.8	0.9	0.9	0.9	1.0	1.0	1.1	1.3	1.4	1.6	1.9	2.0

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.41791078E-01
Q1	8.79402140E+01
P2	1.80161529E-02
Q2	2.41895821E-02
P3	3.13394163E-01
Q3	5.13888539E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.5	6.8
Frac. eq. (ref.)	0.7	6.9

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

2019-4-1	Transmittance
2015-4-1	Color Code
2012-4-1	1st edition