

# Q-SK52S

$n_d = 1.582860$

$n_e = 1.585196$

$v_d = 59.51$

$v_e = 59.27$

Glass code (d)	583595
Glass code (e)	585593

Spectral l.	Refractive idx
2.058	1.55741
1.970	1.55876
1.530	1.56484
1.129	1.57002
1.064	1.57093
t	1.57168
s	1.57452
A'	1.576429
r	1.578158
C	1.579869
C'	1.580346
He-Ne	1.580791
D	1.582773
d	1.582860
e	1.585196
F	1.589664
F'	1.590220
g	1.594961
h	1.599351
0.389	1.602026
i	1.606821

Coef. disp. form. (pwr ser.)	
A0	2.46682919E+00
A1	-1.00692159E-02
A2	-1.10027728E-04
A3	1.40726622E-02
A4	1.36654094E-04
A5	8.57488472E-06
A6	-1.75474987E-07
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.009795
F'-C'	0.009874
C-t	0.008187
C-A'	0.003440
d-C	0.002991
e-C	0.005327
g-d	0.012101
g-F	0.005297
h-g	0.004390
i-g	0.011860
C'-t	0.008664
e-C'	0.004850
F'-e	0.005024
i-F'	0.016601

Relative partial dispersion	
C-t/F-C	0.8358
C-A'/F-C	0.3512
d-C/F-C	0.3054
e-C/F-C	0.5438
g-d/F-C	1.2354
g-F/F-C	0.5408
h-g/F-C	0.4482
i-g/F-C	1.2108
C'-t/F'-C'	0.8775
e-C'/F'-C'	0.4912
F'-e/F'-C'	0.5088
i-F'/F'-C'	1.6813

Deviation of relative partial disp.	
$\Delta PdC$	0.0013
$\Delta PgF$	-0.0037

Internal CC (80%/5%)	
325/275	
Color Code (80%/5%)	
335/275	
CCI	
B	0.00
G	0.16
R	0.15

Thermal properties	
CTE(-30,70) [1E-7/°C]	62
CTE(100,300) [1E-7/°C]	88
Tg [°C]	508
At [°C]	553
StP [°C]	456
AP [°C]	489
SP [°C]	621
Ht condct. [W/m·K]	1.100
Sp. heat [kJ/kg·K]	0.769
Ht diffus. [1E-6 m2/sec]	0.508

Chemical properties [class]	
Acid res. (surface)	4
Alkaline detergent res.	3
Climate resistance	1
Water res. (powder)	2
Acid res. (powder)	3

Mechanical properties	
Knoop hardness	579 (6)
Abrasion hardness	108
Young's mod. [GPa]	85.3
Shear mod. [GPa]	32.9
Poisson's ratio	0.296
Stress optical coef. [1E-5 nm/cm/Pa]	2.42

Internal trans. (10mm)	
$\lambda$ [nm]	$\tau$
280	0.08
290	0.19
300	0.38
310	0.58
320	0.74
330	0.85
340	0.920
350	0.957
360	0.975
370	0.985
380	0.989
390	0.992
400	0.994
420	0.995
440	0.995
460	0.996
480	0.998
500	0.998
550	0.999
600	0.999
650	0.999
700	0.998
800	0.999
900	0.999
1000	0.999
1200	0.999
1400	0.998
1600	0.995
1800	0.986
2000	0.980
2200	0.936
2400	0.86

Specific gravity	
2.8	

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

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	3.4	3.5	3.6	3.7	3.8	3.8	3.9	4.0	4.2	4.5	4.6	5.0	5.4	5.7	
60 to 80	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.7	3.8	4.0	4.3	4.4	4.8	5.2	5.4	
40 to 60	2.9	2.9	3.1	3.2	3.3	3.4	3.4	3.4	3.5	3.7	4.0	4.1	4.5	4.9	5.1	
20~40	2.7	2.7	2.8	2.9	3.0	3.1	3.1	3.1	3.3	3.4	3.7	3.8	4.2	4.5	4.7	
0 to 20	2.4	2.4	2.6	2.6	2.7	2.8	2.9	2.9	3.0	3.1	3.4	3.5	3.8	4.2	4.4	
-20 to 0	2.2	2.2	2.3	2.4	2.5	2.6	2.6	2.6	2.7	2.9	3.2	3.2	3.5	3.9	4.1	
-40 to -20	1.9	2.0	2.1	2.1	2.2	2.3	2.3	2.4	2.5	2.6	2.9	2.9	3.2	3.5	3.7	
-60 to -40	1.7	1.7	1.8	1.9	2.0	2.0	2.1	2.1	2.2	2.3	2.6	2.6	2.9	3.2	3.4	
-70 to -60	1.5	1.5	1.6	1.7	1.8	1.8	1.9	1.9	2.0	2.1	2.3	2.4	2.7	3.0	3.1	

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

Fitting error of disp. form. $\sigma$ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.4	7.0
Frac. eq. (ref.)	-	-

Prod. Freq. (A to D) A

Similar glass type			
OHARA	-	HOYA	-
C.D.G.M	-	SCHOTT	-

2020-4-1	StP,AP,SP
2019-4-1	Transmittance
2015-4-1	1st edition