

Q-LAK52S

$n_d = 1.677980$

$n_e = 1.680924$

$v_d = 54.89$

$v_e = 54.66$

Glass code (d)
678549
Glass code (e)
681547

Spectral l.	Refractive idx
2.058	1.64682
1.970	1.64844
1.530	1.65577
1.129	1.66204
1.064	1.66315
t	1.66407
s	1.66757
A'	1.669931
r	1.672085
C	1.674224
C'	1.674822
He-Ne	1.675380
D	1.677870
d	1.677980
e	1.680924
F	1.686575
F'	1.687280
g	1.693304
h	1.698901
0.389	1.702320
i	1.708466

Coef. disp. form. (pwr ser.)	
A0	2.76405609E+00
A1	-1.26400636E-02
A2	-1.60322951E-04
A3	1.84903089E-02
A4	2.67778201E-04
A5	5.29803264E-06
A6	1.21335917E-07
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.012351
F'-C'	0.012458
C-t	0.010153
C-A'	0.004293
d-C	0.003756
e-C	0.006700
g-d	0.015324
g-F	0.006729
h-g	0.005597
i-g	0.015162
C'-t	0.010751
e-C'	0.006102
F'-e	0.006356
i-F'	0.021186

Relative partial dispersion	
C-t/F-C	0.8220
C-A'/F-C	0.3476
d-C/F-C	0.3041
e-C/F-C	0.5425
g-d/F-C	1.2407
g-F/F-C	0.5448
h-g/F-C	0.4532
i-g/F-C	1.2276
C'-t/F'-C'	0.8630
e-C'/F'-C'	0.4898
F'-e/F'-C'	0.5102
i-F'/F'-C'	1.7006

Deviation of relative partial disp.	
ΔPdC	0.0021
ΔPgF	-0.0074

Internal CC (80%/5%)	
342/277	
Color Code (80%/5%)	
360/280	
CCI	
B	0.00
G	0.21
R	0.21

Thermal properties	
CTE(-30,70) [1E-7/°C]	59
CTE(100,300) [1E-7/°C]	79
Tg [°C]	559
At [°C]	597
StP [°C]	511
AP [°C]	541
SP [°C]	653
Ht condct. [W/m·K]	0.976
Sp. heat [kJ/kg·K]	0.666
Ht diffus. [1E-6 m2/sec]	0.413

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

Mechanical properties	
Knoop hardness	566 (6)
Abrasion hardness	104
Young's mod. [GPa]	106.9
Shear mod. [GPa]	41.6
Poisson's ratio	0.284
Stress optical coef. [1E-5 nm/cm/Pa]	2.19

Internal trans. (10mm)	
λ [nm]	τ
280	0.06
290	0.12
300	0.21
310	0.34
320	0.50
330	0.65
340	0.78
350	0.86
360	0.921
370	0.954
380	0.974
390	0.983
400	0.989
420	0.994
440	0.995
460	0.997
480	0.998
500	0.999
550	0.999
600	0.999
650	0.999
700	0.998
800	0.988
900	0.999
1000	0.996
1200	0.999
1400	0.992
1600	0.990
1800	0.979
2000	0.957
2200	0.88
2400	0.66

Specific gravity	
3.55	

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	4.4	4.5	4.6	4.7	4.9	4.9	4.9	5.1	5.3	5.8	5.8	6.3	6.7	7.0	
60 to 80(ref.)	4.2	4.2	4.4	4.5	4.6	4.7	4.8	4.8	5.0	5.2	5.6	5.7	6.1	6.5	6.8	
40 to 60	4.1	4.1	4.3	4.4	4.5	4.6	4.6	4.7	4.8	5.0	5.4	5.5	5.9	6.3	6.6	
20 to 40	4.0	4.0	4.1	4.2	4.4	4.5	4.5	4.5	4.7	4.9	5.3	5.3	5.8	6.2	6.4	
0 to 20	3.9	3.9	4.1	4.2	4.3	4.4	4.4	4.5	4.6	4.8	5.2	5.2	5.6	6.0	6.3	
-20 to 0	3.9	3.9	4.1	4.1	4.2	4.4	4.4	4.4	4.6	4.8	5.1	5.2	5.6	5.9	6.2	
-40 to -20	3.9	4.0	4.1	4.2	4.3	4.4	4.4	4.5	4.6	4.8	5.1	5.2	5.6	5.9	6.2	
-60 to -40(ref.)	4.1	4.1	4.2	4.3	4.4	4.5	4.6	4.6	4.7	4.9	5.2	5.3	5.7	6.0	6.2	
-70 to -60(ref.)	4.3	4.3	4.4	4.5	4.6	4.7	4.7	4.8	4.9	5.1	5.4	5.4	5.8	6.1	6.4	

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	3.3	3.5	3.6	3.7	3.8	3.9	3.9	4.1	4.3	4.7	4.7	5.2	5.6	5.9	
60 to 80	3.1	3.1	3.3	3.4	3.5	3.6	3.6	3.7	3.8	4.0	4.5	4.5	4.9	5.4	5.6	
40 to 60	2.8	2.8	3.0	3.1	3.2	3.3	3.3	3.4	3.5	3.7	4.1	4.2	4.6	5.0	5.3	
20~40	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.1	3.2	3.4	3.8	3.8	4.3	4.6	4.9	
0 to 20	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.8	2.9	3.1	3.5	3.5	3.9	4.3	4.5	
-20 to 0	2.0	2.0	2.1	2.2	2.3	2.4	2.5	2.5	2.6	2.8	3.1	3.2	3.6	3.9	4.2	
-40 to -20	1.7	1.7	1.9	1.9	2.0	2.1	2.2	2.2	2.3	2.5	2.8	2.9	3.2	3.6	3.8	
-60 to -40	1.4	1.5	1.6	1.7	1.7	1.8	1.9	1.9	2.0	2.2	2.5	2.5	2.9	3.2	3.4	
-70 to -60	1.2	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.9	2.3	2.3	2.6	2.9	3.1	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.18769620E-01
Q1	7.08583056E+01
P2	5.80400344E-02
Q2	1.89171164E-02
P3	3.12263556E-01
Q3	4.30169943E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.4	3.6
Frac. eq. (ref.)	0.4	3.8

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	Color Code