

Q-PSKH4S

$n_d = 1.592450$

$n_e = 1.594563$

$v_d = 66.92$

$v_e = 66.68$

Glass code (d)	592669
Glass code (e)	595667

Spectral l.	Refractive idx
2.058	1.56830
1.970	1.56963
1.530	1.57560
1.129	1.58060
1.064	1.58147
t	1.58218
s	1.58483
A'	1.586587
r	1.588172
C	1.589733
C'	1.590168
He-Ne	1.590572
D	1.592371
d	1.592450
e	1.594563
F	1.598586
F'	1.599085
g	1.603330
h	1.607241
0.389	1.609616
i	1.613858

Coef. disp. form. (pwr ser.)	
A0	2.50116352E+00
A1	-1.00351892E-02
A2	-1.18900724E-04
A3	1.27884411E-02
A4	1.28777777E-04
A5	3.72070629E-06
A6	-3.09763293E-08
A7	0.00000000E+00
A8	0.00000000E+00

Partial dispersion	
F-C	0.008853
F'-C'	0.008917
C-t	0.007556
C-A'	0.003146
d-C	0.002717
e-C	0.004830
g-d	0.010880
g-F	0.004744
h-g	0.003911
i-g	0.010528
C'-t	0.007991
e-C'	0.004395
F'-e	0.004522
i-F'	0.014773

Relative partial dispersion	
C-t/F-C	0.8535
C-A'/F-C	0.3554
d-C/F-C	0.3069
e-C/F-C	0.5456
g-d/F-C	1.2290
g-F/F-C	0.5359
h-g/F-C	0.4418
i-g/F-C	1.1892
C'-t/F'-C'	0.8962
e-C'/F'-C'	0.4929
F'-e/F'-C'	0.5071
i-F'/F'-C'	1.6567

Deviation of relative partial disp.	
ΔPdC	-0.0005
ΔPgF	0.0038

Internal CC (80%/5%)	
335/287	

Color Code (80%/5%)	
345/290	

CCI	
B	0.00
G	0.20
R	0.19

Thermal properties	
CTE(-30,70) [1E-7/°C]	90
CTE(100,300) [1E-7/°C]	114
Tg [°C]	497
At [°C]	531
Ht condct. [W/m·K]	0.761
Sp. heat [kJ/kg·K]	0.619
diffus. [1E-6 m2/sec]	0.375

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

Mechanical properties	
Knoop hardness	416 (4)
Abrasion hardness	267
Young's mod. [GPa]	81.6
Shear mod. [GPa]	32.0
Poisson's ratio	0.274
Stress optical coef. [1E-5 nm/cm/Pa]	1.56

Internal trans. (10mm)	
λ [nm]	τ
280	0.02
290	0.07
300	0.20
310	0.39
320	0.58
330	0.74
340	0.85
350	0.917
360	0.955
370	0.975
380	0.985
390	0.990
400	0.992
420	0.994
440	0.994
460	0.995
480	0.996
500	0.997
550	0.998
600	0.999
650	0.998
700	0.998
800	0.997
900	0.997
1000	0.997
1200	0.998
1400	0.995
1600	0.986
1800	0.968
2000	0.945
2200	0.87
2400	0.81

Specific gravity	
3.28	

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.)	-1.9	-1.9	-1.9	-1.8	-1.7	-1.6	-1.6	-1.5	-1.4	-1.3	-1.1	-1.1	-0.7	-0.4	-0.3	
60 to 80(ref.)	-1.9	-1.9	-1.8	-1.8	-1.7	-1.6	-1.6	-1.6	-1.5	-1.4	-1.1	-1.1	-0.8	-0.5	-0.4	
40 to 60	-1.9	-1.9	-1.9	-1.8	-1.7	-1.6	-1.6	-1.6	-1.5	-1.4	-1.2	-1.1	-0.8	-0.6	-0.4	
20 to 40	-1.9	-1.9	-1.8	-1.7	-1.7	-1.6	-1.6	-1.6	-1.5	-1.4	-1.1	-1.1	-0.8	-0.6	-0.5	
0 to 20	-1.8	-1.8	-1.8	-1.7	-1.6	-1.5	-1.5	-1.5	-1.4	-1.3	-1.1	-1.1	-0.8	-0.6	-0.4	
-20 to 0	-1.7	-1.7	-1.6	-1.6	-1.5	-1.4	-1.4	-1.4	-1.3	-1.2	-1.0	-1.0	-0.7	-0.5	-0.4	
-40 to -20	-1.5	-1.5	-1.5	-1.4	-1.3	-1.3	-1.2	-1.2	-1.1	-1.1	-0.9	-0.8	-0.6	-0.4	-0.3	
-60 to -40(ref.)	-1.3	-1.3	-1.2	-1.1	-1.1	-1.0	-1.0	-1.0	-0.9	-0.8	-0.6	-0.6	-0.4	-0.1	-0.1	
-70 to -60(ref.)	-1.0	-1.0	-0.9	-0.9	-0.8	-0.7	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3	-0.1	0.1	0.2	

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	-2.9	-2.9	-2.8	-2.7	-2.7	-2.6	-2.6	-2.5	-2.4	-2.3	-2.1	-2.1	-1.8	-1.5	-1.3	
60 to 80	-3.0	-3.0	-2.9	-2.8	-2.8	-2.7	-2.7	-2.6	-2.6	-2.5	-2.2	-2.2	-1.9	-1.6	-1.5	
40 to 60	-3.1	-3.1	-3.1	-3.0	-2.9	-2.8	-2.8	-2.8	-2.7	-2.6	-2.4	-2.4	-2.1	-1.8	-1.7	
20~40	-3.3	-3.3	-3.2	-3.1	-3.0	-3.0	-3.0	-2.9	-2.9	-2.8	-2.6	-2.5	-2.3	-2.0	-1.9	
0 to 20	-3.4	-3.4	-3.3	-3.3	-3.2	-3.1	-3.1	-3.1	-3.0	-2.9	-2.7	-2.7	-2.4	-2.2	-2.1	
-20 to 0	-3.5	-3.5	-3.5	-3.4	-3.3	-3.3	-3.3	-3.2	-3.2	-3.1	-2.9	-2.9	-2.6	-2.4	-2.3	
-40 to -20	-3.7	-3.7	-3.6	-3.5	-3.5	-3.4	-3.4	-3.4	-3.3	-3.2	-3.1	-3.0	-2.8	-2.6	-2.5	
-60 to -40	-3.8	-3.8	-3.7	-3.7	-3.6	-3.6	-3.5	-3.5	-3.5	-3.4	-3.2	-3.2	-3.0	-2.8	-2.7	
-70 to -60	-3.9	-3.9	-3.8	-3.8	-3.7	-3.7	-3.7	-3.6	-3.6	-3.5	-3.4	-3.3	-3.1	-2.9	-2.9	

Coef. disp. form. (frac. eq.) (ref.)	
P1	1.17509715E-01
Q1	7.86977681E+01
P2	2.36387680E-02
Q2	1.95824976E-02
P3	3.09886091E-01
Q3	4.59554193E-03

Fitting error of disp. form. σ [1E-6]		
	Visible	Infrared
Power ser. eq.	0.4	5.5
Frac. eq. (ref.)	0.5	5.4

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
2015-4-1	1st edition