S-LAH53

Code(d) **806409**
Code(e) **811407**

Refractive Index	n_d	**1.80610** 1.806098	Abbe Number	ν_d **40.92**	Dispersion	n_F-n_C **0.019697**
Refractive Index	n_e	1.810775	Abbe Number	ν_e 40.67	Dispersion	$n_{F'}$-$n_{C'}$ 0.019935

Refractive Indices		
λ(μm)		
n_{2325}	2.32542	1.76051
n_{1970}	1.97009	1.76764
n_{1530}	1.52958	1.77546
n_{1129}	1.12864	1.78287
n_t	1.01398	1.78551
n_s	0.85211	1.79034
$n_{A'}$	0.76819	1.79377
n_r	0.70652	1.79699
n_C	0.65627	1.80025
$n_{C'}$	0.64385	1.80117
n_{He-Ne}	0.6328	1.80203
n_D	0.58929	1.80592
n_d	0.58756	1.80610
n_e	0.54607	1.81078
n_F	0.48613	1.81994
$n_{F'}$	0.47999	1.82110
n_{He-Cd}	0.44157	1.82967
n_g	0.435835	1.83117
n_h	0.404656	1.84078
n_i	0.365015	1.85782

Partial Dispersions	
n_C-n_t	0.014740
n_C-$n_{A'}$	0.006479
n_d-n_C	0.005850
n_e-n_C	0.010527
n_g-n_d	0.025076
n_g-n_F	0.011229
n_h-n_g	0.009607
n_i-n_g	0.026650
n_C-n_t	0.015661
n_e-$n_{C'}$	0.009606
$n_{F'}$-n_e	0.010329
n_i-$n_{F'}$	0.036720

Coloring			
λ_{80}	405	λ_5	340
λ_{70}			

Internal transmission			
$\lambda_{0.80}$	370	$\lambda_{0.05}$	340

CCI		
B	G	R
0.00	1.07	1.13

Constants of Dispersion Formula	
A_1	1.91811619E+00
A_2	2.53724399E-01
A_3	1.39473885E+00
B_1	1.02147684E-02
B_2	4.33176011E-02
B_3	1.01938021E+02

Relative Partial Dispersions	
$\theta_{C,t}$	0.7483
$\theta_{C,A'}$	0.3289
$\theta_{d,C}$	0.2970
$\theta_{e,C}$	0.5344
$\theta_{g,d}$	1.2731
$\theta_{g,F}$	0.5701
$\theta_{h,g}$	0.4877
$\theta_{i,g}$	1.3530
$\theta'_{C',t}$	0.7856
$\theta'_{e,C'}$	0.4819
$\theta'_{F',e}$	0.5181
$\theta'_{i,F'}$	1.8420

Internal Transmittance	
λ(nm)	τ 10mm
280	
290	
300	
310	
320	
330	
340	0.06
350	0.38
360	0.65
370	0.80
380	0.88
390	0.925
400	0.947
420	0.969
440	0.979
460	0.985
480	0.989
500	0.993
550	0.996
600	0.996
650	0.997
700	0.998
800	0.998
900	0.999
1000	0.999
1200	0.999
1400	0.997
1600	0.996
1800	0.989
2000	0.969
2200	0.915
2400	0.72

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	0.0096
$\Delta\theta_{C,A'}$	0.0034
$\Delta\theta_{g,d}$	-0.0066
$\Delta\theta_{g,F}$	-0.0052
$\Delta\theta_{i,g}$	-0.0294

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	3
Weathering Resistance(Surface) Group W(S)	1
Acid Resistance(Surface) Group SR	4.2
Phosphate Resistance PR	2.0

Thermal Properties		
Strain Point StP (℃)		-
Annealing Point AP (℃)		-
Transformation Temperature Tg (℃)		610
Yield Point At (℃)		637
Softening Point SP (℃)		687
Expansion Coefficients α (10^{-7} K^{-1})	(-30~+70℃)	59
	(+100~+300℃)	70
Thermal Conductivity λ W/(m·K)		0.860

Mechanical Properties		
Young's Modulus E (GPa)	112.7	
Rigidity Modulus G (GPa)	43.4	
Poisson's Ratio σ	0.299	
Knoop Hardness Hk[Class]	650	7
Abrasion Aa	80	

Temperature Coefficients of Refractive Index							
Range of Temperature (℃)	Δn/ΔT relative ($10^{-6}$$K^{-1}$)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	5.1	6.2	6.2	6.5	6.8	7.6	8.3
-20~ 0	5.2	6.3	6.3	6.6	6.9	7.7	8.5
0~20	5.3	6.4	6.4	6.7	7.1	7.9	8.7
20~40	5.6	6.6	6.7	6.9	7.3	8.1	9.0
40~60	5.8	6.8	6.9	7.2	7.6	8.4	9.4
60~80	6.2	7.1	7.2	7.5	7.8	8.7	9.8

Other Properties	
Photoelastic Constant β nm/(cm·10^5Pa)	1.96
Specific Gravity d	4.43
Remarks	

OHARA 24-01

※The name of the glass type is the model number assigned based on the main components of the composition: large, medium, small refractive index and serial number.