S-LAH95

Code(d) **904313**
Code(e) **910311**

Refractive Index	n_d	**1.90366** 1.903660	Abbe Number	ν_d **31.34**	Dispersion	n_F-n_C **0.028832**
Refractive Index	n_e	1.910476	Abbe Number	ν_e 31.10	Dispersion	$n_{F'}$-$n_{C'}$ 0.029272

Refractive Indices		
λ(μm)		
n_{2325}	2.32542	1.84825
n_{1970}	1.97009	1.85530
n_{1530}	1.52958	1.86342
n_{1129}	1.12864	1.87194
n_t	1.01398	1.87523
n_s	0.85211	1.88155
$n_{A'}$	0.76819	1.88622
n_r	0.70652	1.89068
n_C	0.65627	1.89528
$n_{C'}$	0.64385	1.89659
n_{He-Ne}	0.6328	1.89782
n_D	0.58929	1.90341
n_d	0.58756	1.90366
n_e	0.54607	1.91048
n_F	0.48613	1.92411
$n_{F'}$	0.47999	1.92586
n_{He-Cd}	0.44157	1.93896
n_g	0.435835	1.94130
n_h	0.404656	1.95648
n_i	0.365015	

Constants of Dispersion Formula	
A_1	2.15636617E+00
A_2	3.29558178E-01
A_3	1.72178935E+00
B_1	1.22880510E-02
B_2	5.55507835E-02
B_3	1.24439340E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	1
Weathering Resistance(Surface) Group W(S)	1
Acid Resistance(Surface) Group SR	4.0
Phosphate Resistance PR	1.0

Mechanical Properties		
Young's Modulus E (GPa)	117.7	
Rigidity Modulus G (GPa)	45.2	
Poisson's Ratio σ	0.302	
Knoop Hardness Hk[Class]	660	7
Abrasion Aa	85	

Partial Dispersions	
n_C-n_t	0.020047
n_C-$n_{A'}$	0.009057
n_d-n_C	0.008383
n_e-n_C	0.015199
n_g-n_d	0.037641
n_g-n_F	0.017192
n_h-n_g	0.015178
n_i-n_g	
n_C-n_t	0.021356
n_e-$n_{C'}$	0.013890
$n_{F'}$-n_e	0.015382
n_i-$n_{F'}$	

Relative Partial Dispersions	
$\theta_{C,t}$	0.6953
$\theta_{C,A'}$	0.3141
$\theta_{d,C}$	0.2908
$\theta_{e,C}$	0.5272
$\theta_{g,d}$	1.3055
$\theta_{g,F}$	0.5963
$\theta_{h,g}$	0.5264
$\theta_{i,g}$	
$\theta'_{C',t}$	0.7296
$\theta'_{e,C'}$	0.4745
$\theta'_{F',e}$	0.5255
$\theta'_{i,F'}$	

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	0.0016
$\Delta\theta_{C,A'}$	0.0003
$\Delta\theta_{g,d}$	0.0059
$\Delta\theta_{g,F}$	0.0055
$\Delta\theta_{i,g}$	

Thermal Properties		
Strain Point StP (℃)		615
Annealing Point AP (℃)		638
Transformation Temperature Tg (℃)		649
Yield Point At (℃)		684
Softening Point SP (℃)		713
Expansion Coefficients α (10^{-7} K^{-1})	(-30~+70℃)	73
	(+100~+300℃)	87
Thermal Conductivity λ W/(m·K)		0.861

Coloring			
λ_{80}		λ_5	360
λ_{70}	410		

Internal transmission			
$\lambda_{0.80}$	400	$\lambda_{0.05}$	360

CCI		
B	G	R
0.00	4.11	4.35

Internal Transmittance	
λ(nm)	τ 10mm
280	
290	
300	
310	
320	
330	
340	
350	
360	0.06
370	0.31
380	0.56
390	0.71
400	0.80
420	0.89
440	0.934
460	0.956
480	0.970
500	0.980
550	0.992
600	0.995
650	0.996
700	0.997
800	0.998
900	0.998
1000	0.998
1200	0.999
1400	0.997
1600	0.995
1800	0.988
2000	0.972
2200	0.933
2400	0.81

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	2.9	4.0	4.0	4.4	4.9	6.1	7.3
-20~ 0	2.9	4.1	4.2	4.6	5.1	6.3	7.7
0~20	3.0	4.2	4.3	4.7	5.2	6.5	8.0
20~40	3.0	4.3	4.4	4.8	5.3	6.7	8.2
40~60	3.1	4.4	4.5	5.0	5.5	7.0	8.6
60~80	3.3	4.7	4.8	5.2	5.8	7.3	9.0

Other Properties	
Photoelastic Constant β nm/(cm·10^5Pa)	1.43
Specific Gravity d	4.64
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.