S-LAH79

Code(d) **003283**
Code(e) **012281**

Refractive Index	n_d	**2.00330** 2.003300	Abbe Number	ν_d	**28.27**	Dispersion	n_F-n_C	**0.035486**
Refractive Index	n_e	2.011689	Abbe Number	ν_e	28.07	Dispersion	$n_{F'}$-$n_{C'}$	0.036041

Refractive Indices		
λ(μm)		
n_{2325}	2.32542	1.93904
n_{1970}	1.97009	1.94642
n_{1530}	1.52958	1.95518
n_{1129}	1.12864	1.96486
n_t	1.01398	1.96873
n_s	0.85211	1.97630
$n_{A'}$	0.76819	1.98195
n_r	0.70652	1.98739
n_C	0.65627	1.99301
$n_{C'}$	0.64385	1.99461
$n_{He\text{-}Ne}$	0.6328	1.99613
n_D	0.58929	2.00299
n_d	0.58756	2.00330
n_e	0.54607	2.01169
n_F	0.48613	2.02850
$n_{F'}$	0.47999	2.03066
$n_{He\text{-}Cd}$	0.44157	2.04682
n_g	0.435835	2.04972
n_h	0.404656	2.06844
n_i	0.365015	

Constants of Dispersion Formula	
A_1	2.32557148E+00
A_2	5.07967133E-01
A_3	2.43087198E+00
B_1	1.32895208E-02
B_2	5.28335449E-02
B_3	1.61122408E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	1
Weathering Resistance(Surface) Group W(S)	2
Acid Resistance(Surface) Group SR	1.0
Phosphate Resistance PR	1.0

Mechanical Properties		
Young's Modulus E (GPa)	125.5	
Rigidity Modulus G (GPa)	48.4	
Poisson's Ratio σ	0.297	
Knoop Hardness Hk[Class]	700 *	7
Abrasion Aa	63	

Partial Dispersions	
n_C-n_t	0.024281
n_C-$n_{A'}$	0.011059
n_d-n_C	0.010289
n_e-n_C	0.018678
n_g-n_d	0.046416
n_g-n_F	0.021219
n_h-n_g	0.018725
n_i-n_g	
n_C-n_t	0.025885
n_e-$n_{C'}$	0.017074
n_F-n_e	0.018967
n_i-$n_{F'}$	

Relative Partial Dispersions	
$\theta_{C,t}$	0.6842
$\theta_{C,A'}$	0.3116
$\theta_{d,C}$	0.2899
$\theta_{e,C}$	0.5263
$\theta_{g,d}$	1.3080
$\theta_{g,F}$	0.5980
$\theta_{h,g}$	0.5277
$\theta_{i,g}$	
$\theta'_{C',t}$	0.7182
$\theta'_{e,C'}$	0.4737
$\theta'_{F',e}$	0.5263
$\theta'_{i,F'}$	

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	0.0049
$\Delta\theta_{C,A'}$	0.0015
$\Delta\theta_{g,d}$	0.0020
$\Delta\theta_{g,F}$	0.0023
$\Delta\theta_{i,g}$	

Thermal Properties		
Strain Point StP (℃)		-
Annealing Point AP (℃)		-
Transformation Temperature Tg (℃)		699
Yield Point At (℃)		731
Softening Point SP (℃)		-
Expansion Coefficients α (10^{-7} K^{-1})	(-30~+70℃)	60
	(+100~+300℃)	71
Thermal Conductivity λ W/(m·K)		0.957

Coloring			
λ_{80}		λ_5	370
λ_{70}	460		

Internal transmission			
$\lambda_{0.80}$	435	$\lambda_{0.05}$	371

CCI		
B	G	R
0.00	10.86	11.57

Internal Transmittance	
λ(nm)	τ 10mm
280	
290	
300	
310	
320	
330	
340	
350	
360	
370	0.03
380	0.16
390	0.33
400	0.50
420	0.72
440	0.83
460	0.88
480	0.921
500	0.945
550	0.979
600	0.988
650	0.991
700	0.993
800	0.996
900	0.997
1000	0.997
1200	0.998
1400	0.998
1600	0.997
1800	0.994
2000	0.986
2200	0.966
2400	0.89

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	6.5	8.0	8.1	8.6	9.2	10.7	12.4
-20~ 0	6.7	8.2	8.3	8.9	9.5	11.1	12.9
0~20	6.9	8.5	8.6	9.2	9.8	11.5	13.4
20~40	7.0	8.7	8.9	9.4	10.1	11.9	13.8
40~60	7.2	9.0	9.1	9.7	10.4	12.2	14.3
60~80	7.4	9.2	9.4	10.0	10.7	12.6	14.8

Other Properties	
Photoelastic Constant β nm/(cm·10^5Pa)	1.89
Specific Gravity d	5.23
Remarks	

OHARA 23-05

※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.