S-LAH66

Code(d) **773496**
Code(e) **776493**

Refractive Index	n_d	**1.77250** 1.772499	Abbe Number	ν_d	**49.60**	Dispersion	n_F-n_C **0.015576**
Refractive Index	n_e	1.776208	Abbe Number	ν_e	49.36	Dispersion	$n_{F'}$-$n_{C'}$ 0.015727

Refractive Indices		
λ(μm)		
n_{2325}	2.32542	1.73031
n_{1970}	1.97009	1.73786
n_{1530}	1.52958	1.74590
n_{1129}	1.12864	1.75303
n_t	1.01398	1.75541
n_s	0.85211	1.75960
$n_{A'}$	0.76819	1.76248
n_r	0.70652	1.76514
n_C	0.65627	1.76780
$n_{C'}$	0.64385	1.76854
$n_{He\text{-}Ne}$	0.6328	1.76924
n_D	0.58929	1.77236
n_d	0.58756	1.77250
n_e	0.54607	1.77621
n_F	0.48613	1.78337
$n_{F'}$	0.47999	1.78427
$n_{He\text{-}Cd}$	0.44157	1.79083
n_g	0.435835	1.79197
n_h	0.404656	1.79917
n_i	0.365015	1.81158

Constants of Dispersion Formula	
A_1	1.39280586E+00
A_2	6.79577094E-01
A_3	1.38702069E+00
B_1	6.08475118E-03
B_2	2.33925351E-02
B_3	9.58354094E+01

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	51.2
Phosphate Resistance PR	1.0

Mechanical Properties		
Young's Modulus E (GPa)	121.9	
Rigidity Modulus G (GPa)	47.2	
Poisson's Ratio σ	0.291	
Knoop Hardness Hk[Class]	700 ∗	7
Abrasion Aa	61	

Partial Dispersions	
n_C-n_t	0.012391
n_C-$n_{A'}$	0.005314
n_d-n_C	0.004701
n_e-n_C	0.008410
n_g-n_d	0.019473
n_g-n_F	0.008598
n_h-n_g	0.007202
n_i-n_g	0.019610
n_C-n_t	0.013137
n_e-$n_{C'}$	0.007664
n_F-n_e	0.008063
n_i-$n_{F'}$	0.027311

Relative Partial Dispersions	
$\theta_{C,t}$	0.7955
$\theta_{C,A'}$	0.3412
$\theta_{d,C}$	0.3018
$\theta_{e,C}$	0.5399
$\theta_{g,d}$	1.2502
$\theta_{g,F}$	0.5520
$\theta_{h,g}$	0.4624
$\theta_{i,g}$	1.2590
$\theta'_{C',t}$	0.8353
$\theta'_{e,C'}$	0.4873
$\theta'_{F',e}$	0.5127
$\theta'_{i,F'}$	1.7366

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	0.0161
$\Delta\theta_{C,A'}$	0.0052
$\Delta\theta_{g,d}$	-0.0115
$\Delta\theta_{g,F}$	-0.0092
$\Delta\theta_{i,g}$	-0.0507

Thermal Properties		
Strain Point StP (℃)		641
Annealing Point AP (℃)		660
Transformation Temperature Tg (℃)		686
Yield Point At (℃)		706
Softening Point SP (℃)		726
Expansion Coefficients α (10^{-7} K^{-1})	(-30~+70℃)	62
	(+100~+300℃)	74
Thermal Conductivity λ W/(m·K)		0.845

Coloring			
λ_{80}	370	λ_5	305
λ_{70}			

Internal transmission			
$\lambda_{0.80}$	349	$\lambda_{0.05}$	308

CCI		
B	G	R
0.00	0.44	0.42

Internal Transmittance	
λ(nm)	τ 10mm
280	
290	
300	
310	0.10
320	0.33
330	0.55
340	0.71
350	0.81
360	0.88
370	0.930
380	0.956
390	0.971
400	0.979
420	0.987
440	0.991
460	0.994
480	0.996
500	0.997
550	0.999
600	0.998
650	0.998
700	0.999
800	0.998
900	0.998
1000	0.998
1200	0.997
1400	0.993
1600	0.993
1800	0.983
2000	0.958
2200	0.88
2400	0.64

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	3.4	3.8	3.8	4.0	4.2	4.7	5.1
-20~ 0	3.5	3.9	4.0	4.2	4.4	4.8	5.3
0~20	3.6	4.1	4.1	4.3	4.5	5.0	5.5
20~40	3.7	4.2	4.3	4.5	4.7	5.2	5.7
40~60	3.8	4.4	4.4	4.7	4.9	5.4	5.9
60~80	3.9	4.5	4.6	4.8	5.0	5.6	6.1

Other Properties	
Photoelastic Constant β nm/(cm·10^5Pa)	1.43
Specific Gravity d	4.23
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.