S-LAH60

Code(d) **834372**
Code(e) **839369**

Refractive Index	n_d	**1.83400** 1.834000	Abbe Number	ν_d **37.16**	Dispersion	n_F-n_C **0.022443**
Refractive Index	n_e	1.839323	Abbe Number	ν_e 36.92	Dispersion	$n_{F'}$-$n_{C'}$ 0.022736

Refractive Indices		
λ(μm)		
n_{2325}	2.32542	1.78473
n_{1970}	1.97009	1.79205
n_{1530}	1.52958	1.80018
n_{1129}	1.12864	1.80807
n_t	1.01398	1.81094
n_s	0.85211	1.81627
$n_{A'}$	0.76819	1.82009
n_r	0.70652	1.82370
n_C	0.65627	1.82738
$n_{C'}$	0.64385	1.82842
n_{He-Ne}	0.6328	1.82939
n_D	0.58929	1.83380
n_d	0.58756	1.83400
n_e	0.54607	1.83932
n_F	0.48613	1.84982
$n_{F'}$	0.47999	1.85115
n_{He-Cd}	0.44157	1.86103
n_g	0.435835	1.86278
n_h	0.404656	1.87396
n_i	0.365015	1.89403

Constants of Dispersion Formula	
A_1	1.95243469E+00
A_2	3.07100210E-01
A_3	1.56578094E+00
B_1	1.06442437E-02
B_2	4.56735302E-02
B_3	1.10281410E+02

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	1.0

Mechanical Properties		
Young's Modulus E (GPa)	124.8	
Rigidity Modulus G (GPa)	48.1	
Poisson's Ratio σ	0.296	
Knoop Hardness Hk[Class]	660	7
Abrasion Aa	79	

Partial Dispersions	
n_C-n_t	0.016437
n_C-$n_{A'}$	0.007283
n_d-n_C	0.006624
n_e-n_C	0.011947
n_g-n_d	0.028781
n_g-n_F	0.012962
n_h-n_g	0.011183
n_i-n_g	0.031249
n_C-n_t	0.017477
n_e-$n_{C'}$	0.010907
$n_{F'}$-n_e	0.011829
n_i-$n_{F'}$	0.042878

Relative Partial Dispersions	
$\theta_{C,t}$	0.7324
$\theta_{C,A'}$	0.3245
$\theta_{d,C}$	0.2951
$\theta_{e,C}$	0.5323
$\theta_{g,d}$	1.2824
$\theta_{g,F}$	0.5776
$\theta_{h,g}$	0.4983
$\theta_{i,g}$	1.3924
$\theta'_{C',t}$	0.7687
$\theta'_{e,C'}$	0.4797
$\theta'_{F',e}$	0.5203
$\theta'_{i,F'}$	1.8859

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	0.0114
$\Delta\theta_{C,A'}$	0.0036
$\Delta\theta_{g,d}$	-0.0051
$\Delta\theta_{g,F}$	-0.0037
$\Delta\theta_{i,g}$	-0.0215

Thermal Properties		
Strain Point StP (℃)		-
Annealing Point AP (℃)		-
Transformation Temperature Tg (℃)		612
Yield Point At (℃)		632
Softening Point SP (℃)		676
Expansion Coefficients α (10^{-7} K^{-1})	(-30~+70℃)	56
	(+100~+300℃)	71
Thermal Conductivity λ W/(m·K)		0.872

Coloring			
λ_{80}	420	λ_5	340
λ_{70}			

Internal transmission			
$\lambda_{0.80}$	377	$\lambda_{0.05}$	341

CCI		
B	G	R
0.00	1.57	1.66

Internal Transmittance	
λ(nm)	τ 10mm
280	
290	
300	
310	
320	
330	
340	0.03
350	0.27
360	0.54
370	0.72
380	0.83
390	0.88
400	0.924
420	0.957
440	0.972
460	0.980
480	0.986
500	0.990
550	0.996
600	0.997
650	0.997
700	0.998
800	0.999
900	0.998
1000	0.997
1200	0.996
1400	0.993
1600	0.992
1800	0.984
2000	0.964
2200	0.906
2400	0.72

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	6.0	6.9	6.9	7.3	7.6	8.4	9.3
-20~ 0	6.3	7.0	7.1	7.4	7.7	8.6	9.6
0~20	6.3	7.1	7.2	7.6	7.9	8.8	9.8
20~40	6.4	7.3	7.3	7.7	8.1	9.0	10.1
40~60	6.6	7.4	7.5	7.9	8.3	9.3	10.3
60~80	6.7	7.5	7.6	8.0	8.4	9.5	10.6

Other Properties	
Photoelastic Constant β nm/(cm·10^5Pa)	2.15
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.