S-LAH58

Code(d) **883408**
Code(e) **888405**

Refractive Index	n_d	**1.88300** 1.882997	Abbe Number	ν_d	**40.76**	Dispersion	n_F-n_C	**0.021661**
Refractive Index	n_e	1.888146	Abbe Number	ν_e	40.52	Dispersion	$n_{F'}$-$n_{C'}$	0.021919

Refractive Indices		
λ(μm)		
n_{2325}	2.32542	1.83590
n_{1970}	1.97009	1.84264
n_{1530}	1.52958	1.85023
n_{1129}	1.12864	1.85776
n_t	1.01398	1.86054
n_s	0.85211	1.86572
$n_{A'}$	0.76819	1.86946
n_r	0.70652	1.87298
n_C	0.65627	1.87656
$n_{C'}$	0.64385	1.87757
n_{He-Ne}	0.6328	1.87852
n_D	0.58929	1.88281
n_d	0.58756	1.88300
n_e	0.54607	1.88815
n_F	0.48613	1.89822
$n_{F'}$	0.47999	1.89949
n_{He-Cd}	0.44157	1.90885
n_g	0.435835	1.91050
n_h	0.404656	1.92092
n_i	0.365015	1.93917

Constants of Dispersion Formula	
A_1	1.78764964E+00
A_2	6.52635600E-01
A_3	1.79914564E+00
B_1	8.47378536E-03
B_2	3.13126408E-02
B_3	1.32788001E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	1
Weathering Resistance(Surface) Group W(S)	1～2
Acid Resistance(Surface) Group SR	2.2
Phosphate Resistance PR	1.0

Mechanical Properties		
Young's Modulus E (GPa)	126.8	
Rigidity Modulus G (GPa)	48.7	
Poisson's Ratio σ	0.301	
Knoop Hardness Hk[Class]	710	7
Abrasion Aa	62	

Partial Dispersions	
n_C-n_t	0.016022
n_C-$n_{A'}$	0.007103
n_d-n_C	0.006437
n_e-n_C	0.011586
n_g-n_d	0.027500
n_g-n_F	0.012276
n_h-n_g	0.010422
n_i-n_g	0.028677
n_C-n_t	0.017035
n_e-$n_{C'}$	0.010573
$n_{F'}$-n_e	0.011346
n_i-$n_{F'}$	0.039682

Relative Partial Dispersions	
$\theta_{C,t}$	0.7397
$\theta_{C,A'}$	0.3279
$\theta_{d,C}$	0.2972
$\theta_{e,C}$	0.5349
$\theta_{g,d}$	1.2696
$\theta_{g,F}$	0.5667
$\theta_{h,g}$	0.4811
$\theta_{i,g}$	1.3239
$\theta'_{C',t}$	0.7772
$\theta'_{e,C'}$	0.4824
$\theta'_{F',e}$	0.5176
$\theta'_{i,F'}$	1.8104

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	0.0018
$\Delta\theta_{C,A'}$	0.0026
$\Delta\theta_{g,d}$	-0.0105
$\Delta\theta_{g,F}$	-0.0088
$\Delta\theta_{i,g}$	-0.0598

Thermal Properties		
Strain Point StP (℃)		666
Annealing Point AP (℃)		714
Transformation Temperature Tg (℃)		738
Yield Point At (℃)		765
Softening Point SP (℃)		803
Expansion Coefficients α (10^{-7} K^{-1})	(-30~+70℃)	66
	(+100~+300℃)	78
Thermal Conductivity λ W/(m·K)		0.827

Coloring			
λ_{80}		λ_5	315
λ_{70}	375		

Internal transmission			
$\lambda_{0.80}$	374	$\lambda_{0.05}$	320

CCI		
B	G	R
0.00	1.69	1.75

Internal Transmittance	
λ(nm)	τ 10mm
280	
290	
300	
310	
320	0.05
330	0.17
340	0.34
350	0.51
360	0.66
370	0.77
380	0.84
390	0.89
400	0.924
420	0.951
440	0.965
460	0.974
480	0.982
500	0.988
550	0.995
600	0.995
650	0.995
700	0.995
800	0.995
900	0.995
1000	0.995
1200	0.996
1400	0.996
1600	0.996
1800	0.992
2000	0.980
2200	0.956
2400	0.84

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	3.3	4.1	4.1	4.4	4.7	5.4	6.2
-20~ 0	3.4	4.2	4.3	4.6	4.9	5.6	6.4
0~20	3.6	4.3	4.4	4.7	5.0	5.8	6.6
20~40	3.7	4.5	4.5	4.9	5.2	6.0	6.8
40~60	3.9	4.6	4.6	5.0	5.3	6.2	7.1
60~80	4.0	4.7	4.8	5.2	5.5	6.4	7.3

Other Properties	
Photoelastic Constant β nm/(cm·10^5Pa)	1.30
Specific Gravity d	5.52
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.