S-LAH64

Code(d) **788474**
Code(e) **792471**

Refractive Index	n_d	**1.78800** 1.788001	Abbe Number	ν_d **47.37**	Dispersion	n_F-n_C **0.016636**
Refractive Index	n_e	1.791961	Abbe Number	ν_e 47.12	Dispersion	$n_{F'}$-$n_{C'}$ 0.016806

Refractive Indices		
λ(μm)		
n_{2325}	2.32542	1.74466
n_{1970}	1.97009	1.75220
n_{1530}	1.52958	1.76026
n_{1129}	1.12864	1.76750
n_t	1.01398	1.76996
n_s	0.85211	1.77433
$n_{A'}$	0.76819	1.77737
n_r	0.70652	1.78018
n_C	0.65627	1.78300
$n_{C'}$	0.64385	1.78379
n_{He-Ne}	0.6328	1.78453
n_D	0.58929	1.78785
n_d	0.58756	1.78800
n_e	0.54607	1.79196
n_F	0.48613	1.79963
$n_{F'}$	0.47999	1.80060
n_{He-Cd}	0.44157	1.80765
n_g	0.435835	1.80888
n_h	0.404656	1.81666
n_i	0.365015	1.83016

Constants of Dispersion Formula	
A_1	1.83021453E+00
A_2	2.91563590E-01
A_3	1.28544024E+00
B_1	9.04823290E-03
B_2	3.30756689E-02
B_3	8.93675501E+01

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	3
Weathering Resistance(Surface) Group W(S)	2
Acid Resistance(Surface) Group SR	4.0
Phosphate Resistance PR	1.0

Mechanical Properties		
Young's Modulus E (GPa)	122.4	
Rigidity Modulus G (GPa)	47.3	
Poisson's Ratio σ	0.294	
Knoop Hardness Hk[Class]	750	7
Abrasion Aa	63	

Partial Dispersions	
n_C-n_t	0.013038
n_C-$n_{A'}$	0.005628
n_d-n_C	0.005003
n_e-n_C	0.008963
n_g-n_d	0.020881
n_g-n_F	0.009248
n_h-n_g	0.007782
n_i-n_g	0.021279
n_C-n_t	0.013830
n_e-$n_{C'}$	0.008171
$n_{F'}$-n_e	0.008635
n_i-$n_{F'}$	0.029565

Relative Partial Dispersions	
$\theta_{C,t}$	0.7837
$\theta_{C,A'}$	0.3383
$\theta_{d,C}$	0.3007
$\theta_{e,C}$	0.5388
$\theta_{g,d}$	1.2552
$\theta_{g,F}$	0.5559
$\theta_{h,g}$	0.4678
$\theta_{i,g}$	1.2791
$\theta'_{C',t}$	0.8229
$\theta'_{e,C'}$	0.4862
$\theta'_{F',e}$	0.5138
$\theta'_{i,F'}$	1.7592

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	0.0148
$\Delta\theta_{C,A'}$	0.0050
$\Delta\theta_{g,d}$	-0.0111
$\Delta\theta_{g,F}$	-0.0089
$\Delta\theta_{i,g}$	-0.0493

Thermal Properties		
Strain Point StP (℃)		644
Annealing Point AP (℃)		660
Transformation Temperature Tg (℃)		685
Yield Point At (℃)		705
Softening Point SP (℃)		732
Expansion Coefficients α (10^{-7} K^{-1})	(-30~+70℃)	61
	(+100~+300℃)	74
Thermal Conductivity λ W/(m·K)		0.856

Coloring			
λ_{80}	380	λ_5	315
λ_{70}			

Internal transmission			
$\lambda_{0.80}$	354	$\lambda_{0.05}$	317

CCI		
B	G	R
0.00	0.63	0.65

Internal Transmittance	
λ(nm)	τ 10mm
280	
290	
300	
310	
320	0.13
330	0.40
340	0.63
350	0.77
360	0.85
370	0.912
380	0.943
390	0.961
400	0.972
420	0.981
440	0.986
460	0.990
480	0.993
500	0.996
550	0.998
600	0.998
650	0.998
700	0.998
800	0.999
900	0.998
1000	0.997
1200	0.996
1400	0.995
1600	0.993
1800	0.987
2000	0.966
2200	0.915
2400	0.68

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	3.5	3.9	3.9	4.1	4.3	4.8	5.3
-20~ 0	3.5	4.0	4.0	4.2	4.4	5.0	5.5
0~20	3.6	4.1	4.1	4.3	4.6	5.1	5.7
20~40	3.7	4.2	4.2	4.4	4.7	5.3	5.8
40~60	3.8	4.3	4.3	4.5	4.8	5.4	6.0
60~80	3.9	4.4	4.4	4.6	4.9	5.5	6.2

Other Properties	
Photoelastic Constant β nm/(cm·10^5Pa)	1.40
Specific Gravity d	4.30
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.