L-BAL35P

Code(d) **592610**
Code(e) **594608**

Refractive Index	n_d	**1.59208**	Abbe Number	ν_d	**61.00**	Dispersion	n_F-n_C	**0.009707**
		1.592080						
Refractive Index	n_e	1.594396	Abbe Number	ν_e	60.77	Dispersion	$n_{F'}$-$n_{C'}$	0.009781

Refractive Indices		
λ(μm)		
n_{2325}	2.32542	1.56051
n_{1970}	1.97009	1.56687
n_{1530}	1.52958	1.57353
n_{1129}	1.12864	1.57908
n_t	1.01398	1.58082
n_s	0.85211	1.58373
$n_{A'}$	0.76819	1.58566
n_r	0.70652	1.58740
n_C	0.65627	1.58911
$n_{C'}$	0.64385	1.58958
n_{He-Ne}	0.6328	1.59002
n_D	0.58929	1.59199
n_d	0.58756	1.59208
n_e	0.54607	1.59440
n_F	0.48613	1.59881
$n_{F'}$	0.47999	1.59936
n_{He-Cd}	0.44157	1.60335
n_g	0.435835	1.60404
n_h	0.404656	1.60836
n_i	0.365015	1.61570

Constants of Dispersion Formula	
A_1	8.06742194E-01
A_2	6.90488648E-01
A_3	1.26477947E+00
B_1	1.48836231E-02
B_2	2.51943058E-03
B_3	1.11314570E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	2
Acid Resistance(Powder) Group RA(P)	4
Weathering Resistance(Surface) Group W(S)	3
Acid Resistance(Surface) Group SR	52.2
Phosphate Resistance PR	3.2

Mechanical Properties		
Young's Modulus E (10^8N/m^2)	1008	
Rigidity Modulus G (10^8N/m^2)	403	
Poisson's Ratio σ	0.252	
Knoop Hardness Hk[Class]	630	6
Abrasion Aa	100	
Photoelastic Constant β nm/(cm·10^5Pa)		2.29

Partial Dispersions	
n_C-n_t	0.008288
n_C-$n_{A'}$	0.003444
n_d-n_C	0.002974
n_e-n_C	0.005290
n_g-n_d	0.011957
n_g-n_F	0.005224
n_h-n_g	0.004322
n_i-n_g	0.011660
n_C-n_t	0.008763
n_e-$n_{C'}$	0.004815
$n_{F'}$-n_e	0.004966
n_i-$n_{F'}$	0.016335

Relative Partial Dispersions	
$\theta_{C,t}$	0.8538
$\theta_{C,A'}$	0.3548
$\theta_{d,C}$	0.3064
$\theta_{e,C}$	0.5450
$\theta_{g,d}$	1.2318
$\theta_{g,F}$	0.5382
$\theta_{h,g}$	0.4452
$\theta_{i,g}$	1.2012
$\theta'_{C',t}$	0.8959
$\theta'_{e,C'}$	0.4923
$\theta'_{F',e}$	0.5077
$\theta'_{i,F'}$	1.6701

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	0.0209
$\Delta\theta_{C,A'}$	0.0050
$\Delta\theta_{g,d}$	-0.0062
$\Delta\theta_{g,F}$	-0.0046
$\Delta\theta_{i,g}$	-0.0130

Thermal Properties		
Strain Point StP (℃)		489
Annealing Point AP (℃)		520
Transformation Temperature Tg (℃)		527
Yield Point At (℃)		567
Softening Point SP (℃)		619
Expansion Coefficients α (10^{-7}/℃)	(-30~+70℃)	66
	(+100~+300℃)	81
Thermal Conductivity λ W/(m·K)		1.13

Coloring			
λ_{80}	345	λ_5	295
λ_{70}			

Internal transmission			
$\lambda_{0.80}$	336	$\lambda_{0.05}$	300

CCI		
B	G	R
0.00	0.23	0.20

Internal Transmittance	
λ(nm)	τ 10mm
280	
290	
300	0.06
310	0.27
320	0.53
330	0.73
340	0.85
350	0.922
360	0.956
370	0.975
380	0.984
390	0.989
400	0.992
420	0.993
440	0.993
460	0.995
480	0.996
500	0.998
550	0.999
600	0.998
650	0.998
700	0.998
800	0.999
900	0.998
1000	0.997
1200	0.997
1400	0.991
1600	0.994
1800	0.989
2000	0.978
2200	0.934
2400	0.81

Temperature Coefficients of Refractive Index							
Range of Temperature (℃)	Δn/ΔT relative (10^{-6}/℃)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	3.9	4.3	4.3	4.4	4.5	4.8	5.1
-20~ 0	3.9	4.3	4.3	4.5	4.6	4.9	5.2
0~20	4.0	4.4	4.4	4.5	4.7	5.0	5.3
20~40	4.0	4.4	4.5	4.6	4.7	5.1	5.4
40~60	4.1	4.5	4.5	4.7	4.8	5.2	5.5
60~80	4.1	4.5	4.6	4.8	4.9	5.2	5.6

Other Properties	
Bubble Quality Group B	
Specific Gravity d	2.82
Remarks	

OHARA 17-04

※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.