L-BSL 7

Code(d) **516641**

Code(e) **518638**

Refractive Index	n_d	**1.51633**	Abbe Number	v_d	**64.1**	Dispersion	n_F-n_C **0.00806**
		1.516330			64.06		0.008060
Refractive Index	n_e	1.518253	Abbe Number	v_e	63.87	Dispersion	$n_{F'}$-$n_{C'}$ 0.008114

Refractive Indicies		
λ(μm)		
n_{2325}	2.32542	1.48810
n_{1970}	1.97009	1.49404
n_{1530}	1.52958	1.50020
n_{1129}	1.12864	1.50523
n_t	1.01398	1.50677
n_s	0.85211	1.50930
$n_{A'}$	0.76819	1.51094
n_r	0.70652	1.51241
n_C	0.65627	1.51385
$n_{C'}$	0.64385	1.51424
n_{He-Ne}	0.6328	1.51462
n_D	0.58929	1.51626
n_d	0.58756	1.51633
n_e	0.54607	1.51825
n_F	0.48613	1.52191
$n_{F'}$	0.47999	1.52236
n_{He-Cd}	0.44157	1.52564
n_g	0.435835	1.52620
n_h	0.404656	1.52975
n_i	0.365015	1.53574

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	0.0312
$\Delta\theta_{C,A'}$	0.0068
$\Delta\theta_{g,d}$	-0.0066
$\Delta\theta_{g,F}$	-0.0045
$\Delta\theta_{i,g}$	-0.0049

Constants of Dispersion Formula	
A_1	9.17473918E-01
A_2	3.52687665E-01
A_3	1.05579788E+00
B_1	5.27701411E-03
B_2	1.70809497E-02
B_3	1.04302583E+02

Other Properties	
Bubble Quality Group B	
Specific Gravity d	2.38
Remarks	

Partial Dispersions	
n_C-n_t	0.007081
n_C-$n_{A'}$	0.002904
n_d-n_C	0.002484
n_e-n_C	0.004407
n_g-n_d	0.009874
n_g-n_F	0.004298
n_h-n_g	0.003544
n_i-n_g	0.009541
n_C-n_t	0.007479
n_e-$n_{C'}$	0.004009
n_F-n_e	0.004105
n_i-$n_{F'}$	0.013387

Thermal Properties		
Strain Point StP (℃)		464
Annealing Point AP (℃)		488
Transformation Temperature Tg (℃)		498
Yield Point At (℃)		549
Softening Point SP (℃)		630
Expansion Coefficients α (10^{-7}/℃)	(-30~+70℃)	58
	(+100~+300℃)	71
Thermal Conductivity k (W/m·K)		1.169

Mechanical Properties		
Young's Modulus E (10^8N/m^2)	793	
Rigidity Modulus G (10^8N/m^2)	327	
Poisson's Ratio σ	0.214	
Knoop Hardness Hk[Class]	560	6
Abrasion Aa	69	
Photoelastic Constant β (nm/cm/10^5Pa)		2.93

Chemical Properties	
Water Resistance(Powder) Group RW(P)	2
Acid Resistance(Powder) Group RA(P)	1
Weathering Resistance(Surface) Group W(S)	3
Acid Resistance(Surface) Group SR	1.0
Phosphate Resistance PR	1.2

Temperature Coefficients of Refractive Index							
Range of Temperature (℃)	dn/dt relative (10^{-6}/℃)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	4.0	4.3	4.3	4.4	4.5	4.7	4.9
-20~ 0	4.1	4.4	4.4	4.5	4.6	4.8	5.1
0~20	4.1	4.5	4.5	4.6	4.7	4.9	5.2
20~40	4.2	4.6	4.6	4.7	4.8	5.1	5.3
40~60	4.3	4.7	4.7	4.8	4.9	5.2	5.5
60~80	4.4	4.7	4.8	4.9	5.0	5.3	5.6

Relative Partial Dispersions	
$\theta_{C,t}$	0.8785
$\theta_{C,A'}$	0.3603
$\theta_{d,C}$	0.3082
$\theta_{e,C}$	0.5468
$\theta_{g,d}$	1.2251
$\theta_{g,F}$	0.5333
$\theta_{h,g}$	0.4397
$\theta_{i,g}$	1.1837
$\theta'_{C',t}$	0.9217
$\theta'_{e,C'}$	0.4941
$\theta'_{F',e}$	0.5059
$\theta'_{i,F}$	1.6499

Coloring			
λ_{80}	33	λ_5	30
λ_{70}			

Internal Transmittance	
λ(nm)	τ10mm
280	
290	
300	0.08
310	0.40
320	0.71
330	0.87
340	0.942
350	0.973
360	0.986
370	0.992
380	0.994
390	0.996
400	0.997
420	0.997
440	0.997
460	0.997
480	0.998
500	0.999
550	0.999
600	0.999
650	0.999
700	0.999
800	0.999
900	0.999
1000	0.999
1200	0.999
1400	0.974
1600	0.994
1800	0.988
2000	0.974
2200	0.87
2400	0.80