L-BAL35

Code(d) **589612**

Code(e) **591609**

Refractive Index	n_d	**1.58913**	Abbe Number	v_d	**61.2**	Dispersion	n_F-n_C **0.00963**
		1.589130			61.15		0.009634
Refractive Index	n_e	1.591428	Abbe Number	v_e	60.93	Dispersion	n_F'-$n_{C'}$ 0.009706

Refractive Indicies		
λ(μm)		
n_{2325}	2.32542	1.55775
n_{1970}	1.97009	1.56407
n_{1530}	1.52958	1.57069
n_{1129}	1.12864	1.57622
n_t	1.01398	1.57795
n_s	0.85211	1.58085
$n_{A'}$	0.76819	1.58276
n_r	0.70652	1.58448
n_C	0.65627	1.58618
$n_{C'}$	0.64385	1.58665
n_{He-Ne}	0.6328	1.58709
n_D	0.58929	1.58904
n_d	0.58756	1.58913
n_e	0.54607	1.59143
n_F	0.48613	1.59581
$n_{F'}$	0.47999	1.59636
n_{He-Cd}	0.44157	1.60031
n_g	0.435835	1.60100
n_h	0.404656	1.60528
n_i	0.365015	1.61256

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	0.0207
$\Delta\theta_{C,A'}$	0.0048
$\Delta\theta_{g,d}$	-0.0059
$\Delta\theta_{g,F}$	-0.0043
$\Delta\theta_{i,g}$	-0.0124

Constants of Dispersion Formula	
A_1	1.16262630E+00
A_2	3.25661051E-01
A_3	1.35132486E+00
B_1	1.25957437E-02
B_2	-3.26911050E-03
B_3	1.19214596E+02

Other Properties	
Bubble Quality Group B	
Specific Gravity d	2.82
Remarks	

Partial Dispersions	
n_C-n_t	0.008230
n_C-$n_{A'}$	0.003418
n_d-n_C	0.002952
n_e-n_C	0.005250
n_g-n_d	0.011867
n_g-n_F	0.005185
n_h-n_g	0.004288
n_i-n_g	0.011567
n_C-n_t	0.008702
n_e-$n_{C'}$	0.004778
n_F-n_e	0.004928
n_i-$n_{F'}$	0.016208

Thermal Properties		
Strain Point StP (℃)		489
Annealing Point AP (℃)		520
Transformation Temperature Tg (℃)		527
Yield Point At (℃)		567
Softening Point SP (℃)		619
Expansion Coefficients	(-30~+70℃)	66
α (10^{-7}/℃)	(+100~+300℃)	81
Thermal Conductivity k (W/m·K)		1.126

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

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

Relative Partial Dispersions	
$\theta_{C,t}$	0.8543
$\theta_{C,A'}$	0.3548
$\theta_{d,C}$	0.3064
$\theta_{e,C}$	0.5449
$\theta_{g,d}$	1.2318
$\theta_{g,F}$	0.5382
$\theta_{h,g}$	0.4451
$\theta_{i,g}$	1.2006
$\theta'_{C',t}$	0.8966
$\theta'_{e,C'}$	0.4923
$\theta'_{F',e}$	0.5077
$\theta'_{i,F}$	1.6699

Coloring			
λ_{80}	35	λ_5	30
λ_{70}			

Internal Transmittance	
λ(nm)	τ10mm
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 (℃)	dn/dt 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