S-BSL7R

Code(d) **516641**

Code(e) **518638**

Refractive Index	n_d	**1.51633** 1.516330	Abbe Number	v_d	**(64.1)** **64.07**		Dispersion	n_F-n_C	**(0.00806)** **0.008059**
Refractive Index	n_e	1.518252	Abbe Number	v_e	63.86		Dispersion	$n_{F'}$-$n_{C'}$	0.008116

Refractive Indicies		
λ(μm)		
n_{2325}	2.325420	1.48868
n_{1970}	1.970090	1.49443
n_{1530}	1.529580	1.50041
n_{1129}	1.128640	1.50532
n_t	1.013980	1.50683
n_s	0.852110	1.50933
$n_{A'}$	0.768190	1.51096
n_r	0.706520	1.51242
n_C	0.656270	**1.51385**
$n_{C'}$	0.643850	1.51425
$n_{He\text{-}Ne}$	0.632800	1.51462
n_D	0.589290	1.51626
n_d	0.587560	**1.51633**
n_e	0.546070	1.51825
n_F	0.486130	**1.52191**
$n_{F'}$	0.479990	1.52237
$n_{He\text{-}Cd}$	0.441570	1.52566
n_g	0.435835	**1.52624**
n_h	0.404656	1.52983
n_i	0.365015	1.53596

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	0.0238
$\Delta\theta_{C,A'}$	0.0049
$\Delta\theta_{g,d}$	-0.0023
$\Delta\theta_{g,F}$	-0.0009
$\Delta\theta_{i,g}$	0.0183

Constants of Dispersion Formula	
A_1	1.25261065E+00
A_2	1.74514762E-02
A_3	1.10159469E+00
B_1	7.96445107E-03
B_2	5.09231412E-02
B_3	1.11983520E+02

Other Properties	
Bubble Quality Group	
Specific Gravity	2.50
Remarks	

Partial Dispersions	
n_C-nt	0.007020
n_C-$n_{A'}$	0.002888
n_d-n_C	0.002478
n_e-n_C	0.004400
n_g-n_d	0.009908
n_g-n_F	0.004327
n_h-n_g	0.003588
n_i-n_g	0.009726
n_C-n_t	0.007417
n_e-$n_{C'}$	0.004003
$n_{F'}$-n_e	0.004113
n_i-$n_{F'}$	0.013599

Thermal Properties		
Strain Point StP (°C)		529
Annealing Point AP (°C)		554
Transformation Temperature Tg (°C)		589
Yeild Point At (°C)		649
Softening Point SP (°C)		721
Expansion Coefficients	(-30~+70°C)	75
α (10-7/°C)	(+100~+300°C)	84
Thermal Conductivity k (W/m•K)		1.15

Mechanical Properties		
Young's Modulus E (10^9N/m^2)	808	
Rigidity Modulus G (10^9N/m^2)	335	
Poisson's Ratio σ	0.206	
Knoop Hardness Hk[Class]	610	6
Abrasion Aa	94	
Photoelastic Constant β (nm/cm/10^5Pa)		2.80

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

Relative Partial Dispersions	
$\theta_{C,t}$	0.8711
$\theta_{C,A'}$	0.3584
$\theta_{d,C}$	0.3075
$\theta_{e,C}$	0.5460
$\theta_{g,d}$	1.2294
$\theta_{g,F}$	0.5369
$\theta_{h,g}$	0.4452
$\theta_{i,g}$	1.2068
$\theta'_{C',t}$	0.9139
$\theta'_{e,C'}$	0.4932
$\theta'_{F',e}$	0.5068
$\theta'_{i,F}$	1.6756

Coloring			
λ_{80}	410	λ_5	365
λ_{70}			

Internal Transmittance	
λ(nm)	τ10mm
280	
290	
300	
310	
320	
330	
340	
350	0.02
360	0.20
370	0.400
380	0.566
390	0.738
400	0.841
420	0.932
440	0.960
460	0.972
480	0.978
500	0.982
550	0.989
600	0.993
650	0.995
700	0.998
800	0.999
900	0.999
1000	0.999
1200	0.999
1400	0.983
1600	0.995
1800	0.985
2000	0.966
2200	0.892
2400	0.847

Temperature Coefficients of Refractive Index							
Range of Temperature (°C)	dn/dt relative (10-6/℃)						
	t	C'	He-Ne	D	e	F'	g
-40~20	2.5	2.7	2.7	2.8	3.0	3.2	3.4
-20~ 0	2.5	2.8	2.8	2.9	3.0	3.3	3.5
0~20	2.5	2.9	2.9	3.0	3.1	3.3	3.6
20~40	2.6	2.9	2.9	3.0	3.2	3.4	3.7
40~60	2.7	3.0	3.0	3.1	3.3	3.6	3.8
60~80	2.8	3.2	3.2	3.3	3.4	3.7	4.0