S-LAM55

Code(d) **762401**

Code(e) **767398**

Refractive Index	n_d	**1.76200**	Abbe Number	v_d	**40.1**	Dispersion	n_F-n_C **0.01900**
		1.762001			40.10		0.019003
Refractive Index	n_e	1.766509	Abbe Number	v_e	39.82	Dispersion	n_F'-$n_{C'}$ 0.019247

Refractive Indicies		
λ(μm)		
n_{2325}	2.32542	1.72020
n_{1970}	1.97009	1.72640
n_{1530}	1.52958	1.73328
n_{1129}	1.12864	1.73998
n_t	1.01398	1.74242
n_s	0.85211	1.74695
$n_{A'}$	0.76819	1.75020
n_r	0.70652	1.75327
n_C	0.65627	1.75639
$n_{C'}$	0.64385	1.75727
n_{He-Ne}	0.6328	1.75810
n_D	0.58929	1.76183
n_d	0.58756	1.76200
n_e	0.54607	1.76651
n_F	0.48613	1.77539
$n_{F'}$	0.47999	1.77652
n_{He-Cd}	0.44157	1.78487
n_g	0.435835	1.78634
n_h	0.404656	1.79580
n_i	0.365015	1.81280

Deviation of Relative Dispersions Δθfrom "Normal"	
$\Delta\theta_{C,t}$	-0.0002
$\Delta\theta_{C,A'}$	0.0008
$\Delta\theta_{g,d}$	-0.0004
$\Delta\theta_{g,F}$	-0.0001
$\Delta\theta_{i,g}$	0.0031

Constants of Dispersion Formula	
A_1	1.85412979E+00
A_2	1.65450323E-01
A_3	1.27255422E+00
B_1	1.08438152E-02
B_2	5.14050980E-02
B_3	1.09986837E+02

Other Properties	
Bubble Quality Group B	
Specific Gravity d	4.22
Remarks	

Partial Dispersions	
n_C-n_t	0.013960
n_C-$n_{A'}$	0.006182
n_d-n_C	0.005616
n_e-n_C	0.010124
n_g-n_d	0.024342
n_g-n_F	0.010955
n_h-n_g	0.009453
n_i-n_g	0.026457
n_C-n_t	0.014843
n_e-$n_{C'}$	0.009241
n_F-n_e	0.010006
n_i-$n_{F'}$	0.036285

Thermal Properties		
Strain Point StP (℃)		589
Annealing Point AP (℃)		617
Transformation Temperature Tg (℃)		632
Yield Point At (℃)		662
Softening Point SP (℃)		709
Expansion Coefficients α (10^{-7}/℃)	(-30~+70℃)	71
	(+100~+300℃)	84
Thermal Conductivity k (W/m·K)		0.741

Mechanical Properties		
Young's Modulus E (10^8N/m^2)	967	
Rigidity Modulus G (10^8N/m^2)	374	
Poisson's Ratio σ	0.292	
Knoop Hardness Hk[Class]	550	6
Abrasion Aa	145	
Photoelastic Constant β (nm/cm/10^5Pa)		1.88

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	4
Weathering Resistance(Surface) Group W(S)	2
Acid Resistance(Surface) Group SR	51.2
Phosphate Resistance PR	1.0

Relative Partial Dispersions	
$\theta_{C,t}$	0.7346
$\theta_{C,A'}$	0.3253
$\theta_{d,C}$	0.2955
$\theta_{e,C}$	0.5328
$\theta_{g,d}$	1.2810
$\theta_{g,F}$	0.5765
$\theta_{h,g}$	0.4974
$\theta_{i,g}$	1.3923
$\theta'_{C',t}$	0.7712
$\theta'_{e,C'}$	0.4801
$\theta'_{F',e}$	0.5199
$\theta'_{i,F}$	1.8852

Coloring			
λ_{80}	40	λ_5	35
λ_{70}			

Internal Transmittance	
λ(nm)	τ10mm
280	
290	
300	
310	
320	
330	
340	
350	0.06
360	0.37
370	0.67
380	0.82
390	0.89
400	0.932
420	0.963
440	0.976
460	0.984
480	0.989
500	0.993
550	0.997
600	0.997
650	0.997
700	0.998
800	0.999
900	0.998
1000	0.998
1200	0.998
1400	0.995
1600	0.994
1800	0.986
2000	0.970
2200	0.923
2400	0.78

Temperature Coefficients of Refractive Index							
Range of Temperature (℃)	dn/dt relative (10^{-6}/℃)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	2.5	3.1	3.1	3.3	3.6	4.3	5.1
-20~ 0	2.6	3.2	3.2	3.5	3.8	4.5	5.3
0~20	2.6	3.3	3.3	3.6	3.9	4.7	5.5
20~40	2.7	3.4	3.4	3.7	4.0	4.8	5.7
40~60	2.8	3.5	3.5	3.8	4.2	5.0	5.9
60~80	2.8	3.6	3.6	3.9	4.3	5.2	6.1