

S-LAM66

Code(d) **801350**

Code(e) **806347**

Refractive Index n_d	1.80100	Abbe Number v_d	35.0	Dispersion n_F-n_C	0.02291
	1.800999		34.97		0.022907
Refractive Index n_e	1.806423	Abbe Number v_e	34.72	Dispersion n_F-n_C'	0.023227

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.75094
n_{1970}	1.97009	1.75842
n_{1530}	1.52958	1.76672
n_{1129}	1.12864	1.77475
n_t	1.01398	1.77766
n_s	0.85211	1.78304
$n_{A'}$	0.76819	1.78691
n_r	0.70652	1.79055
n_C	0.65627	1.79427
$n_{C'}$	0.64385	1.79533
$n_{\text{He-Ne}}$	0.6328	1.79632
n_D	0.58929	1.80080
n_d	0.58756	1.80100
n_e	0.54607	1.80642
n_F	0.48613	1.81718
$n_{F'}$	0.47999	1.81856
$n_{\text{He-Cd}}$	0.44157	1.82879
n_g	0.435835	1.83061
n_h	0.404656	1.84236
n_i	0.365015	1.86391

Partial Dispersions	
n_C-n_t	0.016620
$n_C-n_{A'}$	0.007369
n_d-n_C	0.006724
n_e-n_C	0.012148
n_g-n_d	0.029615
n_g-n_F	0.013432
n_h-n_g	0.011747
n_i-n_g	0.033294
n_C-n_t	0.017674
$n_e-n_{C'}$	0.011094
$n_{F'}-n_e$	0.012133
$n_i-n_{F'}$	0.045352

Relative Partial Dispersions	
$\theta_{C,t}$	0.7255
$\theta_{C,A'}$	0.3217
$\theta_{d,C}$	0.2935
$\theta_{e,C}$	0.5303
$\theta_{g,d}$	1.2928
$\theta_{g,F}$	0.5864
$\theta_{h,g}$	0.5128
$\theta_{i,g}$	1.4534
$\theta'_{C,t}$	0.7609
$\theta'_{e,C'}$	0.4776
$\theta'_{F',e}$	0.5224
$\theta'_{i,F}$	1.9526

Thermal Properties	
Strain Point StP (°C)	514
Annealing Point AP (°C)	544
Transformation Temperature Tg (°C)	554
Yield Point At (°C)	586
Softening Point SP (°C)	629
Expansion Coefficients (-30~+70°C)	79
α (10 ⁻⁷ /°C) (+100~+300°C)	95
Thermal Conductivity k (W/m·K)	1.062

Coloring			
λ_{80}	43	λ_5	35
λ_{70}			

Internal Transmittance	
$\lambda(\text{nm})$	$\tau_{10\text{mm}}$
280	
290	
300	
310	
320	
330	
340	
350	0.03
360	0.28
370	0.57
380	0.73
390	0.82
400	0.87
420	0.932
440	0.954
460	0.968
480	0.977
500	0.985
550	0.994
600	0.994
650	0.994
700	0.997
800	0.998
900	0.998
1000	0.998
1200	0.999
1400	0.998
1600	0.997
1800	0.992
2000	0.976
2200	0.937
2400	0.77

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.0148
$\Delta\theta_{C,A'}$	0.0035
$\Delta\theta_{g,d}$	0.0007
$\Delta\theta_{g,F}$	0.0015
$\Delta\theta_{i,g}$	0.0212

Constants of Dispersion Formula	
A_1	1.92094221E+00
A_2	2.19901208E-01
A_3	1.72705231E+00
B_1	1.15075241E-02
B_2	5.47993543E-02
B_3	1.20133674E+02

Mechanical Properties	
Young's Modulus E (10 ⁸ N/m ²)	1210
Rigidity Modulus G (10 ⁸ N/m ²)	473
Poisson's Ratio σ	0.280
Knoop Hardness Hk[Class]	660 7
Abrasion Aa	92
Photoelastic Constant β (nm/cm/10 ⁵ Pa)	1.92

Chemical Properties	
Water Resistance(Powder) Group RW(P)	2
Acid Resistance(Powder) Group RA(P)	3
Weathering Resistance(Surface) Group W(S)	1 ~ 2
Acid Resistance(Surface) Group SR	4.0
Phosphate Resistance PR	1.0

Other Properties	
Bubble Quality Group B	
Specific Gravity d	3.55
Remarks	

Temperature Coefficients of Refractive Index							
Range of Temperature (°C)	dn/dt relative (10 ⁻⁶ /°C)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	2.2	3.0	3.1	3.3	3.7	4.5	5.5
-20~ 0	2.2	3.1	3.1	3.4	3.8	4.7	5.7
0~20	2.2	3.2	3.2	3.5	3.9	4.9	5.9
20~40	2.3	3.2	3.3	3.6	4.0	5.0	6.1
40~60	2.3	3.3	3.4	3.7	4.1	5.2	6.4
60~80	2.4	3.4	3.5	3.8	4.3	5.4	6.6