

S-LAM66

Code(d) **801350**

Code(e) **806347**

Refractive Index n_d	1.80100	Abbe Number ν_d	34.97	Dispersion n_F-n_C	0.022907
	1.800999				
Refractive Index n_e	1.806423	Abbe Number ν_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_f	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

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

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
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

Mechanical Properties	
Young's Modulus E (GPa)	121.0
Rigidity Modulus G (GPa)	47.3
Poisson's Ratio σ	0.280
Knoop Hardness Hk(Class)	660 * 7
Abrasion Aa	93

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

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

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}K^{-1}) (+100~+300°C)	95
Thermal Conductivity λ W/(m·K)	1.06

Coloring			
λ_{80}	430	λ_5	350
λ_{70}			

Internal transmission			
$\lambda_{0.80}$	388	$\lambda_{0.05}$	351

CCI		
B	G	R
0.00	2.58	2.67

Internal Transmittance	
$\lambda(\text{nm})$	τ 10mm
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

Temperature Coefficients of Refractive Index							
Range of Temperature (°C)	$\Delta n/\Delta T$ relative (10^{-6}K^{-1})						
	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

Other Properties	
Photoelastic Constant β nm/(cm·10 ⁵ Pa)	1.92
Specific Gravity d	3.55
Remarks	

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※The name of the glass type is the model number assigned based on the main components of the composition: large, medium, small refractive index and serial number.