

S-LAM73

Code(d) **794371**

Code(e) **799368**

Refractive Index n_d	1.79360 1.793600	Abbe Number ν_d	37.09	Dispersion n_F-n_C	0.021397
Refractive Index n_e	1.798672	Abbe Number ν_e	36.82	Dispersion $n_F-n_{C'}$	0.021692

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.75073
n_{1970}	1.97009	1.75638
n_{1530}	1.52958	1.76285
n_{1129}	1.12864	1.76952
n_t	1.01398	1.77207
n_s	0.85211	1.77692
$n_{A'}$	0.76819	1.78047
n_r	0.70652	1.78385
n_C	0.65627	1.78732
$n_{C'}$	0.64385	1.78830
$n_{\text{He-Ne}}$	0.6328	1.78923
n_D	0.58929	1.79341
n_d	0.58756	1.79360
n_e	0.54607	1.79867
n_F	0.48613	1.80872
$n_{F'}$	0.47999	1.81000
$n_{\text{He-Cd}}$	0.44157	1.81950
n_g	0.435835	1.82119
n_h	0.404656	1.83200
n_i	0.365015	

Constants of Dispersion Formula	
A_1	1.86353123E+00
A_2	2.55215617E-01
A_3	1.23399133E+00
B_1	1.07620673E-02
B_2	4.87248679E-02
B_3	1.17125110E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	4
Weathering Resistance(Surface) Group W(S)	3
Acid Resistance(Surface) Group SR	52.2
Phosphate Resistance PR	2.2

Mechanical Properties	
Young's Modulus E (GPa)	86.8
Rigidity Modulus G (GPa)	33.2
Poisson's Ratio σ	0.306
Knoop Hardness Hk(Class)	520 5
Abrasion Aa	182

Partial Dispersions	
n_C-n_t	0.015250
$n_C-n_{A'}$	0.006846
n_d-n_C	0.006281
n_e-n_C	0.011353
n_g-n_d	0.027586
n_g-n_F	0.012470
n_h-n_g	0.010815
n_i-n_g	
n_C-n_t	0.016234
$n_e-n_{C'}$	0.010369
$n_{F'}-n_e$	0.011323
$n_i-n_{F'}$	

Relative Partial Dispersions	
$\theta_{C,t}$	0.7127
$\theta_{C,A'}$	0.3200
$\theta_{d,C}$	0.2935
$\theta_{e,C}$	0.5306
$\theta_{g,d}$	1.2892
$\theta_{g,F}$	0.5828
$\theta_{h,g}$	0.5054
$\theta_{i,g}$	
$\theta'_{C,t}$	0.7484
$\theta'_{e,C'}$	0.4780
$\theta'_{F',e}$	0.5220
$\theta'_{i,F'}$	

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	-0.0080
$\Delta\theta_{C,A'}$	-0.0008
$\Delta\theta_{g,d}$	0.0015
$\Delta\theta_{g,F}$	0.0013
$\Delta\theta_{i,g}$	

Thermal Properties	
Strain Point StP (°C)	584
Annealing Point AP (°C)	607
Transformation Temperature Tg (°C)	623
Yield Point At (°C)	658
Softening Point SP (°C)	695
Expansion Coefficients (-30~+70°C)	89
α (10^{-7}K^{-1}) (+100~+300°C)	105
Thermal Conductivity λ W/(m·K)	0.648

Coloring			
λ_{80}	415	λ_5	350
λ_{70}			

Internal transmission			
$\lambda_{0.80}$	382	$\lambda_{0.05}$	349

CCI		
B	G	R
0.00	1.77	1.79

Internal Transmittance	
$\lambda(\text{nm})$	τ 10mm
280	
290	
300	
310	
320	
330	
340	
350	0.08
360	0.34
370	0.62
380	0.78
390	0.87
400	0.916
420	0.954
440	0.968
460	0.976
480	0.983
500	0.989
550	0.995
600	0.994
650	0.994
700	0.996
800	0.998
900	0.998
1000	0.998
1200	0.998
1400	0.997
1600	0.995
1800	0.984
2000	0.964
2200	0.925
2400	0.80

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	-1.9	-1.1	-1.1	-0.8	-0.5	0.3	1.1
-20~ 0	-2.0	-1.2	-1.1	-0.9	-0.5	0.3	1.2
0~20	-2.0	-1.2	-1.1	-0.9	-0.5	0.4	1.3
20~40	-2.1	-1.2	-1.1	-0.9	-0.5	0.4	1.4
40~60	-2.1	-1.2	-1.1	-0.8	-0.4	0.5	1.6
60~80	-2.0	-1.0	-1.0	-0.7	-0.3	0.7	1.8

Other Properties	
Photoelastic Constant β nm/(cm·10 ⁵ Pa)	1.52
Specific Gravity d	4.45
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.