

S-LAM61

Code(d) **720460**

Code(e) **724457**

Refractive Index n_d	1.72000 1.720002	Abbe Number v_d	46.0 46.02	Dispersion n_F-n_C	0.01564 0.015644
Refractive Index n_e	1.723721	Abbe Number v_e	45.75	Dispersion $n_F'-n_C'$	0.015820

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.68252
n_{1970}	1.97009	1.68854
n_{1530}	1.52958	1.69511
n_{1129}	1.12864	1.70126
n_t	1.01398	1.70342
n_s	0.85211	1.70735
$n_{A'}$	0.76819	1.71012
n_r	0.70652	1.71271
n_C	0.65627	1.71533
$n_{C'}$	0.64385	1.71607
$n_{\text{He-Ne}}$	0.6328	1.71676
n_D	0.58929	1.71986
n_d	0.58756	1.72000
n_e	0.54607	1.72372
n_F	0.48613	1.73097
$n_{F'}$	0.47999	1.73189
$n_{\text{He-Cd}}$	0.44157	1.73861
n_g	0.435835	1.73979
n_h	0.404656	1.74727
n_i	0.365015	1.76042

Partial Dispersions	
n_C-n_t	0.011910
$n_C-n_{A'}$	0.005206
n_d-n_C	0.004672
n_e-n_C	0.008391
n_g-n_d	0.019787
n_g-n_F	0.008815
n_h-n_g	0.007485
n_i-n_g	0.020636
n_C-n_t	0.012647
$n_e-n_{C'}$	0.007654
$n_{F'-n_e}$	0.008166
$n_i-n_{F'}$	0.028538

Relative Partial Dispersions	
$\theta_{C,t}$	0.7613
$\theta_{C,A'}$	0.3328
$\theta_{d,C}$	0.2986
$\theta_{e,C}$	0.5364
$\theta_{g,d}$	1.2648
$\theta_{g,F}$	0.5635
$\theta_{h,g}$	0.4785
$\theta_{i,g}$	1.3191
$\theta'_{C,t}$	0.7994
$\theta'_{e,C'}$	0.4838
$\theta'_{F',e}$	0.5162
$\theta'_{i,F}$	1.8039

Thermal Properties	
Strain Point StP (°C)	585
Annealing Point AP (°C)	602
Transformation Temperature Tg (°C)	629
Yield Point At (°C)	665
Softening Point SP (°C)	713
Expansion Coefficients (-30~+70°C)	66
α (10 ⁻⁷ /°C) (+100~+300°C)	80
Thermal Conductivity k (W/m·K)	0.732

Coloring			
λ_{80}	39	λ_5	34
λ_{70}			

Internal Transmittance	
$\lambda(\text{nm})$	$\tau_{10\text{mm}}$
280	
290	
300	
310	
320	
330	
340	0.03
350	0.26
360	0.56
370	0.75
380	0.86
390	0.914
400	0.943
420	0.969
440	0.979
460	0.985
480	0.989
500	0.993
550	0.997
600	0.996
650	0.997
700	0.997
800	0.998
900	0.999
1000	0.998
1200	0.999
1400	0.997
1600	0.997
1800	0.991
2000	0.978
2200	0.942
2400	0.80

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	-0.0013
$\Delta\theta_{C,A'}$	0.0012
$\Delta\theta_{g,d}$	-0.0043
$\Delta\theta_{g,F}$	-0.0035
$\Delta\theta_{i,g}$	-0.0206

Mechanical Properties	
Young's Modulus E (10 ⁸ N/m ²)	937
Rigidity Modulus G (10 ⁸ N/m ²)	363
Poisson's Ratio σ	0.290
Knoop Hardness Hk[Class]	560 6
Abrasion Aa	144
Photoelastic Constant β (nm/cm/10 ⁵ Pa)	1.99

Constants of Dispersion Formula	
A ₁	1.73883330E+00
A ₂	1.50937430E-01
A ₃	1.12118445E+00
B ₁	9.80244105E-03
B ₂	4.33179685E-02
B ₃	1.01214625E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	5
Weathering Resistance(Surface) Group W(S)	2
Acid Resistance(Surface) Group SR	52.2
Phosphate Resistance PR	2.2

Other Properties	
Bubble Quality Group B	
Specific Gravity d	4.10
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	2.9	3.5	3.5	3.7	3.9	4.5	5.1
-20~0	3.0	3.6	3.7	3.9	4.1	4.7	5.3
0~20	3.2	3.8	3.8	4.0	4.3	4.8	5.5
20~40	3.2	3.9	3.9	4.1	4.4	5.0	5.7
40~60	3.3	4.0	4.1	4.3	4.6	5.2	5.9
60~80	3.4	4.2	4.2	4.4	4.7	5.4	6.1