

S-LAM 2

Code(d) **744448**

Code(e) **748445**

Refractive Index n_d	Abbe Number v_d	Dispersion $n_F - n_C$
1.74400	44.8	0.01661
1.743997	44.78	0.016613
Refractive Index n_e	Abbe Number v_e	Dispersion $n_F' - n_C'$
1.747946	44.50	0.016806

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.70597
n_{1970}	1.97009	1.71177
n_{1530}	1.52958	1.71820
n_{1129}	1.12864	1.72436
n_t	1.01398	1.72658
n_s	0.85211	1.73065
$n_{A'}$	0.76819	1.73356
n_r	0.70652	1.73629
n_C	0.65627	1.73905
$n_{C'}$	0.64385	1.73983
$n_{\text{He-Ne}}$	0.6328	1.74056
n_D	0.58929	1.74385
n_d	0.58756	1.74400
n_e	0.54607	1.74795
n_F	0.48613	1.75566
$n_{F'}$	0.47999	1.75663
$n_{\text{He-Cd}}$	0.44157	1.76380
n_g	0.435835	1.76506
n_h	0.404656	1.77304
n_i	0.365015	1.78708

Partial Dispersions	
$n_C - n_t$	0.012472
$n_C - n_{A'}$	0.005488
$n_d - n_C$	0.004949
$n_e - n_C$	0.008898
$n_g - n_d$	0.021058
$n_g - n_F$	0.009394
$n_h - n_g$	0.007986
$n_i - n_g$	0.022027
$n_C - n_t$	0.013252
$n_e - n_{C'}$	0.008118
$n_{F'} - n_e$	0.008688
$n_i - n_{F'}$	0.030448

Relative Partial Dispersions	
$\theta_{C,t}$	0.7507
$\theta_{C,A'}$	0.3303
$\theta_{d,C}$	0.2979
$\theta_{e,C}$	0.5356
$\theta_{g,d}$	1.2676
$\theta_{g,F}$	0.5655
$\theta_{h,g}$	0.4807
$\theta_{i,g}$	1.3259
$\theta'_{C,t}$	0.7885
$\theta'_{e,C'}$	0.4830
$\theta'_{F',e}$	0.5170
$\theta'_{i,F}$	1.8117

Thermal Properties	
Strain Point StP (°C)	590
Annealing Point AP (°C)	617
Transformation Temperature Tg (°C)	633
Yield Point At (°C)	670
Softening Point SP (°C)	711
Expansion Coefficients (-30~+70°C)	74
α ($10^{-7}/^\circ\text{C}$) (+100~+300°C)	87
Thermal Conductivity k (W/m·K)	0.698

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	0.04
350	0.29
360	0.59
370	0.78
380	0.87
390	0.925
400	0.950
420	0.973
440	0.983
460	0.987
480	0.992
500	0.995
550	0.997
600	0.997
650	0.997
700	0.998
800	0.999
900	0.997
1000	0.997
1200	0.999
1400	0.997
1600	0.996
1800	0.988
2000	0.971
2200	0.928
2400	0.79

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	-0.0061
$\Delta\theta_{C,A'}$	0.0002
$\Delta\theta_{g,d}$	-0.0041
$\Delta\theta_{g,F}$	-0.0035
$\Delta\theta_{i,g}$	-0.0242

Mechanical Properties	
Young's Modulus E (10^8N/m^2)	935
Rigidity Modulus G (10^8N/m^2)	361
Poisson's Ratio σ	0.295
Knoop Hardness Hk[Class]	560 6
Abrasion Aa	158
Photoelastic Constant β (nm/cm/ 10^5Pa)	1.72

Constants of Dispersion Formula	
A_1	1.77130000E+00
A_2	1.95814230E-01
A_3	1.19487834E+00
B_1	9.76652444E-03
B_2	4.12718628E-02
B_3	1.10458122E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	4
Weathering Resistance(Surface) Group W(S)	2 ~ 3
Acid Resistance(Surface) Group SR	52.2
Phosphate Resistance PR	3.0

Other Properties	
Bubble Quality Group B	
Specific Gravity d	4.32
Remarks	

Temperature Coefficients of Refractive Index							
Range of Temperature (°C)	dn/dt relative ($10^{-6}/^\circ\text{C}$)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	1.9	2.5	2.5	2.7	3.0	3.5	4.1
-20~0	2.0	2.6	2.6	2.8	3.1	3.7	4.3
0~20	2.0	2.6	2.7	2.9	3.2	3.8	4.5
20~40	2.1	2.7	2.8	3.0	3.3	3.9	4.6
40~60	2.2	2.8	2.8	3.1	3.4	4.1	4.8
60~80	2.2	2.9	2.9	3.2	3.5	4.2	4.9