

L-LAH87

Code(d) **770474**

Code(e) **774471**

Refractive Index n_d	1.77030 1.770300	Abbe Number ν_d	47.4 47.40	Dispersion n_F-n_C	0.01625 0.016251
Refractive Index n_e	1.774170	Abbe Number ν_e	47.14	Dispersion $n_F'-n_C'$	0.016422

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.73168
n_{1970}	1.97009	1.73775
n_{1530}	1.52958	1.74443
n_{1129}	1.12864	1.75074
n_t	1.01398	1.75299
n_s	0.85211	1.75708
$n_{A'}$	0.76819	1.75998
n_r	0.70652	1.76269
n_C	0.65627	1.76543
$n_{C'}$	0.64385	1.76620
$n_{\text{He-Ne}}$	0.6328	1.76692
n_D	0.58929	1.77016
n_d	0.58756	1.77030
n_e	0.54607	1.77417
n_F	0.48613	1.78168
$n_{F'}$	0.47999	1.78262
$n_{\text{He-Cd}}$	0.44157	1.78951
n_g	0.435835	1.79072
n_h	0.404656	1.79830
n_i	0.365015	1.81139

Partial Dispersions	
n_C-n_t	0.012438
$n_C-n_{A'}$	0.005442
n_d-n_C	0.004875
n_e-n_C	0.008745
n_g-n_d	0.020415
n_g-n_F	0.009039
n_h-n_g	0.007586
n_i-n_g	0.020675
n_C-n_t	0.013209
$n_e-n_{C'}$	0.007974
$n_{F'-n_e}$	0.008448
$n_{F'-n_{F'}}$	0.028772

Relative Partial Dispersions	
$\theta_{C,t}$	0.7654
$\theta_{C,A'}$	0.3349
$\theta_{d,C}$	0.3000
$\theta_{e,C}$	0.5381
$\theta_{g,d}$	1.2562
$\theta_{g,F}$	0.5562
$\theta_{h,g}$	0.4668
$\theta_{i,g}$	1.2722
$\theta'_{C,t}$	0.8043
$\theta'_{e,C'}$	0.4856
$\theta'_{F',e}$	0.5144
$\theta'_{i,F}$	1.7520

Thermal Properties	
Strain Point StP (°C)	
Annealing Point AP (°C)	
Transformation Temperature Tg (°C)	548
Yield Point At (°C)	597
Softening Point SP (°C)	
Expansion Coefficients (-30~+70°C)	71
α (10 ⁻⁷ /°C) (+100~+300°C)	88
Thermal Conductivity k (W/m-K)	0.92

Coloring			
λ_{80}	37	λ_5	28
λ_{70}			

Internal Transmittance	
$\lambda(\text{nm})$	τ 10mm
280	
290	
300	0.19
310	0.31
320	0.45
330	0.6
340	0.73
350	0.83
360	0.9
370	0.941
380	0.964
390	0.977
400	0.984
420	0.991
440	0.994
460	0.996
480	0.998
500	0.999
550	0.999
600	0.999
650	0.999
700	0.999
800	0.999
900	0.999
1000	0.999
1200	0.999
1400	0.999
1600	0.999
1800	0.996
2000	0.98
2200	0.95
2400	0.82

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	-0.0037
$\Delta\theta_{C,A'}$	0.0016
$\Delta\theta_{g,d}$	-0.0101
$\Delta\theta_{g,F}$	-0.0086
$\Delta\theta_{i,g}$	-0.0559

Mechanical Properties	
Young's Modulus E (10 ⁸ N/m ²)	1147
Rigidity Modulus G (10 ⁸ N/m ²)	441
Poisson's Ratio σ	0.301
Knoop Hardness Hk[Class]	640 6
Abrasion Aa	79
Photoelastic Constant β (nm/cm/10 ⁵ Pa)	1.89

Constants of Dispersion Formula	
A ₁	1.44196269E+00
A ₂	6.17507311E-01
A ₃	1.21890079E+00
B ₁	7.31826717E-03
B ₂	2.45370775E-02
B ₃	1.05976009E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	4
Weathering Resistance(Surface) Group W(S)	2
Acid Resistance(Surface) Group SR	51.2
Phosphate Resistance PR	2.0

Other Properties	
Bubble Quality Group B	
Specific Gravity d	4.34
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	5.7	6.4	6.5	6.7	7.0	7.7	8.3
-20~ 0	5.7	6.5	6.5	6.8	7.1	7.8	8.5
0~20	5.7	6.5	6.6	6.8	7.1	7.8	8.6
20~40	5.6	6.4	6.5	6.8	7.1	7.8	8.6
40~60	5.6	6.5	6.5	6.8	7.1	7.9	8.7
60~80	5.8	6.7	6.7	7.0	7.4	8.1	8.9