

L-LAH85

Code(d) **854404**

Code(e) **859402**

Refractive Index n_d	1.85400	Abbe Number v_d	40.4	Dispersion n_F-n_C	0.02114
	1.854000		40.39		0.021142
Refractive Index n_e	1.859024	Abbe Number v_e	40.15	Dispersion n_F-n_C'	0.021395

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.80666
n_{1970}	1.97009	1.81375
n_{1530}	1.52958	1.82161
n_{1129}	1.12864	1.82922
n_t	1.01398	1.83199
n_s	0.85211	1.83710
$n_{A'}$	0.76819	1.84077
n_r	0.70652	1.84422
n_C	0.65627	1.84772
$n_{C'}$	0.64385	1.84871
$n_{\text{He-Ne}}$	0.6328	1.84963
n_D	0.58929	1.85381
n_d	0.58756	1.85400
n_e	0.54607	1.85902
n_F	0.48613	1.86886
$n_{F'}$	0.47999	1.87010
$n_{\text{He-Cd}}$	0.44157	1.87925
n_g	0.435835	1.88086
n_h	0.404656	1.89108
n_i	0.365015	1.90905

Partial Dispersions	
n_C-n_t	0.015730
$n_C-n_{A'}$	0.006947
n_d-n_C	0.006283
n_e-n_C	0.011307
n_g-n_d	0.026861
n_g-n_F	0.012002
n_h-n_g	0.010217
n_i-n_g	0.028190
n_C-n_t	0.016719
$n_e-n_{C'}$	0.010318
$n_{F'}-n_e$	0.011077
$n_i-n_{F'}$	0.038950

Relative Partial Dispersions	
$\theta_{C,t}$	0.7440
$\theta_{C,A'}$	0.3286
$\theta_{d,C}$	0.2972
$\theta_{e,C}$	0.5348
$\theta_{g,d}$	1.2705
$\theta_{g,F}$	0.5677
$\theta_{h,g}$	0.4833
$\theta_{i,g}$	1.3334
$\theta'_{C,t}$	0.7814
$\theta'_{e,C'}$	0.4823
$\theta'_{F',e}$	0.5177
$\theta'_{i,F}$	1.8205

Thermal Properties	
Strain Point StP (°C)	
Annealing Point AP (°C)	
Transformation Temperature Tg (°C)	614
Yield Point At (°C)	659
Softening Point SP (°C)	
Expansion Coefficients (-30~+70°C)	65
α (10 ⁻⁷ /°C) (+100~+300°C)	78
Thermal Conductivity k (W/m·K)	0.881

Coloring			
λ_{80}		λ_5	33
λ_{70}	38		

Internal Transmittance	
$\lambda(\text{nm})$	$\tau_{10\text{mm}}$
280	
290	
300	
310	
320	
330	0.04
340	0.24
350	0.49
360	0.67
370	0.78
380	0.85
390	0.9
400	0.924
420	0.951
440	0.965
460	0.975
480	0.983
500	0.99
550	0.998
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	0.982
2200	0.947
2400	0.8

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.0078
$\Delta\theta_{C,A'}$	0.0038
$\Delta\theta_{g,d}$	-0.0103
$\Delta\theta_{g,F}$	-0.0084
$\Delta\theta_{i,g}$	-0.0534

Mechanical Properties	
Young's Modulus E (10 ⁸ N/m ²)	1261
Rigidity Modulus G (10 ⁸ N/m ²)	487
Poisson's Ratio σ	0.296
Knoop Hardness Hk[Class]	650 7
Abrasion Aa	65
Photoelastic Constant β (nm/cm/10 ⁶ Pa)	1.68

Constants of Dispersion Formula	
A ₁	1.93889988E+00
A ₂	3.97879190E-01
A ₃	1.49937713E+00
B ₁	9.96381644E-03
B ₂	3.69751140E-02
B ₃	1.07951467E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	2
Weathering Resistance(Surface) Group W(S)	4
Acid Resistance(Surface) Group SR	2.2
Phosphate Resistance PR	1.0

Other Properties	
Bubble Quality Group B	
Specific Gravity d	5.09
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	4.7	5.5	5.6	5.8	6.1	6.9	7.6
-20~ 0	4.6	5.5	5.5	5.8	6.1	6.9	7.7
0~20	4.7	5.6	5.6	5.9	6.2	7.1	7.9
20~40	4.7	5.7	5.7	6.0	6.4	7.2	8.1
40~60	4.8	5.8	5.8	6.1	6.5	7.4	8.3
60~80	5.0	5.9	6.0	6.3	6.7	7.6	8.5