

L-LAM60

Code(d) **743493**

Code(e) **747490**

Refractive Index n_d	1.74320 1.743198	Abbe Number ν_d	49.3 49.29	Dispersion n_F-n_C	0.01507 0.015077
Refractive Index n_e	1.746788	Abbe Number ν_e	49.00	Dispersion $n_F-n_{C'}$	0.015226

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.70409
n_{1970}	1.97009	1.71082
n_{1530}	1.52958	1.71804
n_{1129}	1.12864	1.72458
n_t	1.01398	1.72681
n_s	0.85211	1.73078
$n_{A'}$	0.76819	1.73354
n_r	0.70652	1.73609
n_C	0.65627	1.73866
$n_{C'}$	0.64385	1.73937
$n_{\text{He-Ne}}$	0.6328	1.74005
n_D	0.58929	1.74306
n_d	0.58756	1.74320
n_e	0.54607	1.74679
n_F	0.48613	1.75373
$n_{F'}$	0.47999	1.75460
$n_{\text{He-Cd}}$	0.44157	1.76096
n_g	0.435835	1.76207
n_h	0.404656	1.76905
n_i	0.365015	1.78108

Partial Dispersions	
n_C-n_t	0.011847
$n_C-n_{A'}$	0.005115
n_d-n_C	0.004543
n_e-n_C	0.008133
n_g-n_d	0.018870
n_g-n_F	0.008336
n_h-n_g	0.006984
n_i-n_g	0.019016
n_C-n_t	0.012567
$n_e-n_{C'}$	0.007413
$n_{F'}-n_e$	0.007813
$n_i-n_{F'}$	0.026483

Relative Partial Dispersions	
$\theta_{C,t}$	0.7858
$\theta_{C,A'}$	0.3393
$\theta_{d,C}$	0.3013
$\theta_{e,C}$	0.5394
$\theta_{g,d}$	1.2516
$\theta_{g,F}$	0.5529
$\theta_{h,g}$	0.4632
$\theta_{i,g}$	1.2613
$\theta'_{C,t}$	0.8254
$\theta'_{e,C'}$	0.4869
$\theta'_{F',e}$	0.5131
$\theta'_{i,F}$	1.7393

Thermal Properties	
Strain Point StP (°C)	511
Annealing Point AP (°C)	533
Transformation Temperature Tg (°C)	541
Yield Point At (°C)	581
Softening Point SP (°C)	623
Expansion Coefficients (-30~+70°C)	74
α (10 ⁻⁷ /°C) (+100~+300°C)	92
Thermal Conductivity k (W/m·K)	0.876

Coloring			
λ_{80}	370	λ_5	310
λ_{70}			

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.0079
$\Delta\theta_{C,A'}$	0.0037
$\Delta\theta_{g,d}$	-0.0108
$\Delta\theta_{g,F}$	-0.0088
$\Delta\theta_{i,g}$	-0.0510

Mechanical Properties	
Young's Modulus E (10 ⁸ N/m ²)	1147
Rigidity Modulus G (10 ⁸ N/m ²)	445
Poisson's Ratio σ	0.289
Knoop Hardness Hk(Class)	620 6
Abrasion Aa	90
Photoelastic Constant β (nm/cm/10 ⁵ Pa)	1.83

Constants of Dispersion Formula	
A_1	1.47574184E+00
A_2	4.96132743E-01
A_3	1.23796236E+00
B_1	7.36950000E-03
B_2	2.51891746E-02
B_3	9.80306651E+01

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	51.2
Phosphate Resistance PR	2.0

Other Properties	
Bubble Quality Group B	
Specific Gravity d	4.20
Remarks	

Internal Transmittance	
$\lambda(\text{nm})$	τ 10mm
280	
290	
300	
310	0.09
320	0.33
330	0.56
340	0.72
350	0.83
360	0.904
370	0.944
380	0.965
390	0.977
400	0.983
420	0.988
440	0.991
460	0.993
480	0.996
500	0.997
550	0.998
600	0.998
650	0.998
700	0.999
800	0.999
900	0.999
1000	0.999
1200	0.999
1400	0.998
1600	0.997
1800	0.991
2000	0.974
2200	0.936
2400	0.75

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	3.3	3.9	3.9	4.1	4.3	4.8	5.3
-20~ 0	3.3	3.9	3.9	4.1	4.3	4.9	5.4
0~20	3.3	3.9	3.9	4.1	4.4	4.9	5.5
20~40	3.2	3.9	4.0	4.2	4.4	5.0	5.6
40~60	3.2	4.0	4.0	4.2	4.5	5.1	5.7
60~80	3.2	4.0	4.0	4.2	4.5	5.1	5.7