

# L-LAM60

Code(d) **743493**

Code(e) **747490**

Refractive Index $n_d$	<b>1.74320</b>	Abbe Number $v_d$	<b>49.3</b>	Dispersion $n_F-n_C$	<b>0.01507</b>
	1.743198		49.29		0.015077
Refractive Index $n_e$	1.746788	Abbe Number $v_e$	49.05	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
$\alpha$ (10 <sup>-7</sup> /°C) (+100~+300°C)	92
Thermal Conductivity k (W/m·K)	0.876

Coloring			
$\lambda_{80}$	37	$\lambda_5$	31
$\lambda_{70}$			

Internal Transmittance	
$\lambda(\text{nm})$	$\tau_{10\text{mm}}$
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

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 <sup>8</sup> N/m <sup>2</sup> )	1147
Rigidity Modulus G (10 <sup>8</sup> N/m <sup>2</sup> )	445
Poisson's Ratio $\sigma$	0.289
Knoop Hardness Hk[Class]	620   6
Abrasion Aa	90
Photoelastic Constant $\beta$ (nm/cm/10 <sup>5</sup> Pa)	1.83

Constants of Dispersion Formula	
A <sub>1</sub>	1.47574184E+00
A <sub>2</sub>	4.96132743E-01
A <sub>3</sub>	1.23796236E+00
B <sub>1</sub>	7.36950000E-03
B <sub>2</sub>	2.51891746E-02
B <sub>3</sub>	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	

Temperature Coefficients of Refractive Index							
Range of Temperature (°C)	dn/dt relative (10 <sup>-6</sup> /°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