

S-LAH60

Code(d) **834372**

Code(e) **839369**

Refractive Index n_d	1.83400 1.834000	Abbe Number v_d	37.2 37.16	Dispersion n_F-n_C	0.02244 0.022443
Refractive Index n_e	1.839323	Abbe Number v_e	36.92	Dispersion n_F-n_C'	0.022736

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.78473
n_{1970}	1.97009	1.79205
n_{1530}	1.52958	1.80018
n_{1129}	1.12864	1.80807
n_t	1.01398	1.81094
n_s	0.85211	1.81627
$n_{A'}$	0.76819	1.82009
n_r	0.70652	1.82370
n_C	0.65627	1.82738
$n_{C'}$	0.64385	1.82842
$n_{\text{He-Ne}}$	0.6328	1.82939
n_D	0.58929	1.83380
n_d	0.58756	1.83400
n_e	0.54607	1.83932
n_F	0.48613	1.84982
$n_{F'}$	0.47999	1.85115
$n_{\text{He-Cd}}$	0.44157	1.86103
n_g	0.435835	1.86278
n_h	0.404656	1.87396
n_i	0.365015	1.89403

Partial Dispersions	
n_C-n_t	0.016437
$n_C-n_{A'}$	0.007283
n_d-n_C	0.006624
n_e-n_C	0.011947
n_g-n_d	0.028781
n_g-n_F	0.012962
n_h-n_g	0.011183
n_i-n_g	0.031249
n_C-n_t	0.017477
$n_e-n_{C'}$	0.010907
$n_{F'-n_e}$	0.011829
$n_i-n_{F'}$	0.042878

Relative Partial Dispersions	
$\theta_{C,t}$	0.7324
$\theta_{C,A'}$	0.3245
$\theta_{d,C}$	0.2951
$\theta_{e,C}$	0.5323
$\theta_{g,d}$	1.2824
$\theta_{g,F}$	0.5776
$\theta_{h,g}$	0.4983
$\theta_{i,g}$	1.3924
$\theta'_{C,t}$	0.7687
$\theta'_{e,C'}$	0.4797
$\theta'_{F',e}$	0.5203
$\theta'_{i,F}$	1.8859

Thermal Properties	
Strain Point StP (°C)	
Annealing Point AP (°C)	
Transformation Temperature Tg (°C)	612
Yield Point At (°C)	632
Softening Point SP (°C)	676
Expansion Coefficients (-30~+70°C)	56
α ($10^{-7}/^\circ\text{C}$) (+100~+300°C)	71
Thermal Conductivity k (W/m-K)	0.872

Coloring			
λ_{80}	42	λ_5	34
λ_{70}			

Internal Transmittance	
$\lambda(\text{nm})$	$\tau_{10\text{mm}}$
280	
290	
300	
310	
320	
330	
340	0.03
350	0.27
360	0.54
370	0.72
380	0.83
390	0.88
400	0.924
420	0.957
440	0.972
460	0.980
480	0.986
500	0.990
550	0.996
600	0.997
650	0.997
700	0.998
800	0.999
900	0.998
1000	0.997
1200	0.996
1400	0.993
1600	0.992
1800	0.984
2000	0.964
2200	0.906
2400	0.72

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.0114
$\Delta\theta_{C,A'}$	0.0036
$\Delta\theta_{g,d}$	-0.0051
$\Delta\theta_{g,F}$	-0.0037
$\Delta\theta_{i,g}$	-0.0215

Mechanical Properties	
Young's Modulus E (10^8N/m^2)	1248
Rigidity Modulus G (10^8N/m^2)	481
Poisson's Ratio σ	0.296
Knoop Hardness Hk[Class]	670 7
Abrasion Aa	78
Photoelastic Constant β (nm/cm/ 10^5Pa)	2.15

Constants of Dispersion Formula	
A ₁	1.95243469E+00
A ₂	3.07100210E-01
A ₃	1.56578094E+00
B ₁	1.06442437E-02
B ₂	4.56735302E-02
B ₃	1.10281410E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	3
Weathering Resistance(Surface) Group W(S)	1
Acid Resistance(Surface) Group SR	4.2
Phosphate Resistance PR	1.0

Other Properties	
Bubble Quality Group B	
Specific Gravity d	4.43
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	6.0	6.9	6.9	7.3	7.6	8.4	9.3
-20~0	6.3	7.0	7.1	7.4	7.7	8.6	9.6
0~20	6.3	7.1	7.2	7.6	7.9	8.8	9.8
20~40	6.4	7.3	7.3	7.7	8.1	9.0	10.1
40~60	6.6	7.4	7.5	7.9	8.3	9.3	10.3
60~80	6.7	7.5	7.6	8.0	8.4	9.5	10.6