

# S-LAH66

Code(d) **773496**

Code(e) **776493**

Refractive Index $n_d$	<b>1.77250</b> 1.772499	Abbe Number $\nu_d$	<b>49.60</b>	Dispersion $n_F-n_C$	<b>0.015576</b>
Refractive Index $n_e$	1.776208	Abbe Number $\nu_e$	49.36	Dispersion $n_F-n_C'$	0.015727

Refractive Indices		
$\lambda(\mu\text{m})$		
$n_{2325}$	2.32542	1.73031
$n_{1970}$	1.97009	1.73786
$n_{1530}$	1.52958	1.74590
$n_{1129}$	1.12864	1.75303
$n_t$	1.01398	1.75541
$n_s$	0.85211	1.75960
$n_{A'}$	0.76819	1.76248
$n_r$	0.70652	1.76514
$n_C$	0.65627	1.76780
$n_{C'}$	0.64385	1.76854
$n_{\text{He-Ne}}$	0.6328	1.76924
$n_D$	0.58929	1.77236
$n_d$	0.58756	1.77250
$n_e$	0.54607	1.77621
$n_F$	0.48613	1.78337
$n_{F'}$	0.47999	1.78427
$n_{\text{He-Cd}}$	0.44157	1.79083
$n_g$	0.435835	1.79197
$n_h$	0.404656	1.79917
$n_i$	0.365015	1.81158

Constants of Dispersion Formula	
$A_1$	1.39280586E+00
$A_2$	6.79577094E-01
$A_3$	1.38702069E+00
$B_1$	6.08475118E-03
$B_2$	2.33925351E-02
$B_3$	9.58354094E+01

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	51.2
Phosphate Resistance PR	1.0

Mechanical Properties	
Young's Modulus E ( $10^9\text{N/m}^2$ )	1219
Rigidity Modulus G ( $10^8\text{N/m}^2$ )	472
Poisson's Ratio $\sigma$	0.291
Knoop Hardness Hk[Class]	700   7
Abrasion Aa	65
Photoelastic Constant $\beta$ (nm/cm/ $10^9\text{Pa}$ )	1.43

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	3.4	3.8	3.8	4.0	4.2	4.7	5.1
-20~ 0	3.5	3.9	4.0	4.2	4.4	4.8	5.3
0~20	3.6	4.1	4.1	4.3	4.5	5.0	5.5
20~40	3.7	4.2	4.3	4.5	4.7	5.2	5.7
40~60	3.8	4.4	4.4	4.7	4.9	5.4	5.9
60~80	3.9	4.5	4.6	4.8	5.0	5.6	6.1

Partial Dispersions	
$n_C-n_t$	0.012391
$n_C-n_{A'}$	0.005314
$n_d-n_C$	0.004701
$n_e-n_C$	0.008410
$n_g-n_d$	0.019473
$n_g-n_F$	0.008598
$n_h-n_g$	0.007202
$n_i-n_g$	0.019610
$n_C-n_t$	0.013137
$n_e-n_{C'}$	0.007664
$n_F-n_e$	0.008063
$n_i-n_{F'}$	0.027311

Relative Partial Dispersions	
$\theta_{C,t}$	0.7955
$\theta_{C,A'}$	0.3412
$\theta_{d,C}$	0.3018
$\theta_{e,C}$	0.5399
$\theta_{g,d}$	1.2502
$\theta_{g,F}$	0.5520
$\theta_{h,g}$	0.4624
$\theta_{i,g}$	1.2590
$\theta'_{C,t}$	0.8353
$\theta'_{e,C'}$	0.4873
$\theta'_{F,e}$	0.5127
$\theta'_{i,F'}$	1.7366

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.0161
$\Delta\theta_{C,A'}$	0.0052
$\Delta\theta_{g,d}$	-0.0115
$\Delta\theta_{g,F}$	-0.0092
$\Delta\theta_{i,g}$	-0.0507

Thermal Properties	
Strain Point StP (°C)	641
Annealing Point AP (°C)	660
Transformation Temperature Tg (°C)	686
Yield Point At (°C)	706
Softening Point SP (°C)	726
Expansion Coefficients (-30~+70°C)	62
$\alpha$ ( $10^{-7}/^\circ\text{C}$ ) (+100~+300°C)	74
Thermal Conductivity k (W/m·K)	0.845

Coloring			
$\lambda_{80}$	370	$\lambda_5$	305
$\lambda_{70}$			

Internal transmission			
$\lambda_{0.80}$	349	$\lambda_{0.05}$	308

CCI		
B	G	R
0.00	0.44	0.42

Internal Transmittance	
$\lambda(\text{nm})$	$\tau$ 10mm
280	
290	
300	
310	0.10
320	0.33
330	0.55
340	0.71
350	0.81
360	0.88
370	0.930
380	0.956
390	0.971
400	0.979
420	0.987
440	0.991
460	0.994
480	0.996
500	0.997
550	0.999
600	0.998
650	0.998
700	0.999
800	0.998
900	0.998
1000	0.998
1200	0.997
1400	0.993
1600	0.993
1800	0.983
2000	0.958
2200	0.88
2400	0.64

Other Properties	
Bubble Quality Group B	
Specific Gravity d	4.23
Remarks	

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