

# S-LAM66

Code(d) **801350**

Code(e) **806347**

Refractive Index $n_d$	<b>1.80100</b> 1.800999	Abbe Number $\nu_d$	<b>34.97</b>	Dispersion $n_F-n_C$	<b>0.022907</b>
Refractive Index $n_e$	1.806423	Abbe Number $\nu_e$	34.72	Dispersion $n_{F'}-n_{C'}$	0.023227

Refractive Indices		
$\lambda(\mu\text{m})$		
$n_{2325}$	2.32542	1.75094
$n_{1970}$	1.97009	1.75842
$n_{1530}$	1.52958	1.76672
$n_{1129}$	1.12864	1.77475
$n_t$	1.01398	1.77766
$n_s$	0.85211	1.78304
$n_{A'}$	0.76819	1.78691
$n_r$	0.70652	1.79055
$n_C$	0.65627	1.79427
$n_{C'}$	0.64385	1.79533
$n_{\text{He-Ne}}$	0.6328	1.79632
$n_D$	0.58929	1.80080
$n_d$	0.58756	1.80100
$n_e$	0.54607	1.80642
$n_F$	0.48613	1.81718
$n_{F'}$	0.47999	1.81856
$n_{\text{He-Cd}}$	0.44157	1.82879
$n_g$	0.435835	1.83061
$n_h$	0.404656	1.84236
$n_i$	0.365015	1.86391

Constants of Dispersion Formula	
$A_1$	1.92094221E+00
$A_2$	2.19901208E-01
$A_3$	1.72705231E+00
$B_1$	1.15075241E-02
$B_2$	5.47993543E-02
$B_3$	1.20133674E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	3
Weathering Resistance(Surface) Group W(S)	1~2
Acid Resistance(Surface) Group SR	4.0
Phosphate Resistance PR	1.0

Mechanical Properties	
Young's Modulus E ( $10^9\text{N/m}^2$ )	1210
Rigidity Modulus G ( $10^8\text{N/m}^2$ )	473
Poisson's Ratio $\sigma$	0.280
Knoop Hardness Hk[Class]	660   7
Abrasion Aa	92
Photoelastic Constant $\beta$ (nm/cm/ $10^9\text{Pa}$ )	1.92

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	2.2	3.0	3.1	3.3	3.7	4.5	5.5
-20~ 0	2.2	3.1	3.1	3.4	3.8	4.7	5.7
0~20	2.2	3.2	3.2	3.5	3.9	4.9	5.9
20~40	2.3	3.2	3.3	3.6	4.0	5.0	6.1
40~60	2.3	3.3	3.4	3.7	4.1	5.2	6.4
60~80	2.4	3.4	3.5	3.8	4.3	5.4	6.6

Partial Dispersions	
$n_C-n_t$	0.016620
$n_C-n_{A'}$	0.007369
$n_d-n_C$	0.006724
$n_e-n_C$	0.012148
$n_g-n_d$	0.029615
$n_g-n_F$	0.013432
$n_h-n_g$	0.011747
$n_i-n_g$	0.033294
$n_C-n_t$	0.017674
$n_e-n_{C'}$	0.011094
$n_{F'}-n_e$	0.012133
$n_i-n_{F'}$	0.045352

Relative Partial Dispersions	
$\theta_{C,t}$	0.7255
$\theta_{C,A'}$	0.3217
$\theta_{d,C}$	0.2935
$\theta_{e,C}$	0.5303
$\theta_{g,d}$	1.2928
$\theta_{g,F}$	0.5864
$\theta_{h,g}$	0.5128
$\theta_{i,g}$	1.4534
$\theta'_{C,t}$	0.7609
$\theta'_{e,C'}$	0.4776
$\theta'_{F',e}$	0.5224
$\theta'_{i,F'}$	1.9526

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.0148
$\Delta\theta_{C,A'}$	0.0035
$\Delta\theta_{g,d}$	0.0007
$\Delta\theta_{g,F}$	0.0015
$\Delta\theta_{i,g}$	0.0212

Thermal Properties	
Strain Point StP (°C)	514
Annealing Point AP (°C)	544
Transformation Temperature Tg (°C)	554
Yield Point At (°C)	586
Softening Point SP (°C)	629
Expansion Coefficients (-30~+70°C)	79
$\alpha$ ( $10^{-7}/^\circ\text{C}$ ) (+100~+300°C)	95
Thermal Conductivity k (W/m·K)	1.06

Coloring			
$\lambda_{80}$	430	$\lambda_5$	350
$\lambda_{70}$			

Internal transmission			
$\lambda_{0.80}$	388	$\lambda_{0.05}$	351

CCI		
B	G	R
0.00	2.58	2.67

Internal Transmittance	
$\lambda(\text{nm})$	$\tau$ 10mm
280	
290	
300	
310	
320	
330	
340	
350	0.03
360	0.28
370	0.57
380	0.73
390	0.82
400	0.87
420	0.932
440	0.954
460	0.968
480	0.977
500	0.985
550	0.994
600	0.994
650	0.994
700	0.997
800	0.998
900	0.998
1000	0.998
1200	0.999
1400	0.998
1600	0.997
1800	0.992
2000	0.976
2200	0.937
2400	0.77

Other Properties	
Bubble Quality Group B	
Specific Gravity d	3.55
Remarks	

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