

S-LAM 3

Code(d) **717479**

Code(e) **721476**

| | | | | | |
|------------------------|----------------|-------------------|-------------|-----------------------|----------------|
| Refractive Index n_d | 1.71700 | Abbe Number v_d | 47.9 | Dispersion n_F-n_C | 0.01496 |
| | 1.717004 | | 47.92 | | 0.014961 |
| Refractive Index n_e | 1.720563 | Abbe Number v_e | 47.64 | Dispersion n_F-n_C' | 0.015124 |

| Refractive Indices | | |
|------------------------|----------|---------|
| $\lambda(\mu\text{m})$ | | |
| n_{2325} | 2.32542 | 1.68133 |
| n_{1970} | 1.97009 | 1.68699 |
| n_{1530} | 1.52958 | 1.69320 |
| n_{1129} | 1.12864 | 1.69905 |
| n_t | 1.01398 | 1.70111 |
| n_s | 0.85211 | 1.70488 |
| $n_{A'}$ | 0.76819 | 1.70754 |
| n_r | 0.70652 | 1.71002 |
| n_C | 0.65627 | 1.71253 |
| $n_{C'}$ | 0.64385 | 1.71323 |
| $n_{\text{He-Ne}}$ | 0.6328 | 1.71390 |
| n_D | 0.58929 | 1.71687 |
| n_d | 0.58756 | 1.71700 |
| n_e | 0.54607 | 1.72056 |
| n_F | 0.48613 | 1.72749 |
| $n_{F'}$ | 0.47999 | 1.72836 |
| $n_{\text{He-Cd}}$ | 0.44157 | 1.73475 |
| n_g | 0.435835 | 1.73587 |
| n_h | 0.404656 | 1.74296 |
| n_i | 0.365015 | 1.75531 |

| Partial Dispersions | |
|---------------------|----------|
| n_C-n_t | 0.011413 |
| $n_C-n_{A'}$ | 0.004990 |
| n_d-n_C | 0.004476 |
| n_e-n_C | 0.008035 |
| n_g-n_d | 0.018871 |
| n_g-n_F | 0.008386 |
| n_h-n_g | 0.007085 |
| n_i-n_g | 0.019433 |
| n_C-n_t | 0.012120 |
| $n_e-n_{C'}$ | 0.007328 |
| $n_{F'-n_e}$ | 0.007796 |
| $n_i-n_{F'}$ | 0.026949 |

| Relative Partial Dispersions | |
|------------------------------|--------|
| $\theta_{C,t}$ | 0.7629 |
| $\theta_{C,A'}$ | 0.3335 |
| $\theta_{d,C}$ | 0.2992 |
| $\theta_{e,C}$ | 0.5371 |
| $\theta_{g,d}$ | 1.2613 |
| $\theta_{g,F}$ | 0.5605 |
| $\theta_{h,g}$ | 0.4736 |
| $\theta_{i,g}$ | 1.2989 |
| $\theta'_{C,t}$ | 0.8014 |
| $\theta'_{e,C'}$ | 0.4845 |
| $\theta'_{F',e}$ | 0.5155 |
| $\theta'_{i,F}$ | 1.7819 |

| Thermal Properties | |
|---|-------|
| Strain Point StP (°C) | 588 |
| Annealing Point AP (°C) | 614 |
| Transformation Temperature Tg (°C) | 630 |
| Yield Point At (°C) | 661 |
| Softening Point SP (°C) | 701 |
| Expansion Coefficients (-30~+70°C) | 80 |
| α (10 ⁻⁷ /°C) (+100~+300°C) | 94 |
| Thermal Conductivity k (W/m·K) | 0.655 |

| Coloring | | | |
|----------------|----|-------------|----|
| λ_{80} | 38 | λ_5 | 34 |
| λ_{70} | | | |

| Internal Transmittance | |
|------------------------|----------------------|
| $\lambda(\text{nm})$ | $\tau_{10\text{mm}}$ |
| 280 | |
| 290 | |
| 300 | |
| 310 | |
| 320 | |
| 330 | |
| 340 | 0.10 |
| 350 | 0.41 |
| 360 | 0.69 |
| 370 | 0.83 |
| 380 | 0.916 |
| 390 | 0.951 |
| 400 | 0.968 |
| 420 | 0.982 |
| 440 | 0.987 |
| 460 | 0.990 |
| 480 | 0.993 |
| 500 | 0.995 |
| 550 | 0.997 |
| 600 | 0.996 |
| 650 | 0.996 |
| 700 | 0.997 |
| 800 | 0.999 |
| 900 | 0.997 |
| 1000 | 0.997 |
| 1200 | 0.996 |
| 1400 | 0.994 |
| 1600 | 0.992 |
| 1800 | 0.983 |
| 2000 | 0.966 |
| 2200 | 0.920 |
| 2400 | 0.77 |

| Deviation of Relative Dispersions $\Delta\theta$ from "Normal" | |
|--|---------|
| $\Delta\theta_{C,t}$ | -0.0086 |
| $\Delta\theta_{C,A'}$ | -0.0004 |
| $\Delta\theta_{g,d}$ | -0.0039 |
| $\Delta\theta_{g,F}$ | -0.0034 |
| $\Delta\theta_{i,g}$ | -0.0249 |

| Mechanical Properties | |
|--|---------|
| Young's Modulus E (10 ⁸ N/m ²) | 868 |
| Rigidity Modulus G (10 ⁸ N/m ²) | 335 |
| Poisson's Ratio σ | 0.294 |
| Knoop Hardness Hk[Class] | 510 5 |
| Abrasion Aa | 202 |
| Photoelastic Constant β (nm/cm/10 ⁵ Pa) | 1.51 |

| Constants of Dispersion Formula | |
|---------------------------------|----------------|
| A ₁ | 1.64258713E+00 |
| A ₂ | 2.39634610E-01 |
| A ₃ | 1.22483026E+00 |
| B ₁ | 8.68246020E-03 |
| B ₂ | 3.51226242E-02 |
| B ₃ | 1.16604369E+02 |

| Chemical Properties | |
|---|------|
| Water Resistance(Powder) Group RW(P) | 3 |
| Acid Resistance(Powder) Group RA(P) | 4 |
| Weathering Resistance(Surface) Group W(S) | 2 |
| Acid Resistance(Surface) Group SR | 53.2 |
| Phosphate Resistance PR | 4.2 |

| Other Properties | |
|------------------------|------|
| Bubble Quality Group B | |
| Specific Gravity d | 4.25 |
| Remarks | |

| 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 | -0.8 | -0.5 | -0.5 | -0.3 | -0.1 | 0.3 | 0.8 |
| -20~ 0 | -0.8 | -0.4 | -0.4 | -0.3 | 0.0 | 0.4 | 0.9 |
| 0~20 | -0.8 | -0.4 | -0.4 | -0.2 | 0.0 | 0.5 | 1.0 |
| 20~40 | -0.8 | -0.4 | -0.3 | -0.2 | 0.1 | 0.6 | 1.1 |
| 40~60 | -0.8 | -0.3 | -0.3 | -0.1 | 0.1 | 0.7 | 1.2 |
| 60~80 | -0.8 | -0.3 | -0.3 | -0.1 | 0.2 | 0.7 | 1.3 |