

L-LAH86

Code(d) **903310**

Code(e) **910308**

| | | | | | |
|------------------------|----------------|-------------------|-------------|-------------------------|----------------|
| Refractive Index n_d | 1.90270 | Abbe Number v_d | 31.0 | Dispersion n_F-n_C | 0.02912 |
| | 1.902700 | | 31.00 | | 0.029115 |
| Refractive Index n_e | 1.909585 | Abbe Number v_e | 30.78 | Dispersion $n_F-n_{C'}$ | 0.029553 |

| Refractive Indices | | |
|------------------------|----------|---------|
| $\lambda(\mu\text{m})$ | | |
| n_{2325} | 2.32542 | 1.84527 |
| n_{1970} | 1.97009 | 1.85288 |
| n_{1530} | 1.52958 | 1.86154 |
| n_{1129} | 1.12864 | 1.87044 |
| n_t | 1.01398 | 1.87383 |
| n_s | 0.85211 | 1.88029 |
| $n_{A'}$ | 0.76819 | 1.88504 |
| n_r | 0.70652 | 1.88957 |
| n_C | 0.65627 | 1.89422 |
| $n_{C'}$ | 0.64385 | 1.89555 |
| $n_{\text{He-Ne}}$ | 0.6328 | 1.89679 |
| n_D | 0.58929 | 1.90245 |
| n_d | 0.58756 | 1.90270 |
| n_e | 0.54607 | 1.90958 |
| n_F | 0.48613 | 1.92334 |
| $n_{F'}$ | 0.47999 | 1.92510 |
| $n_{\text{He-Cd}}$ | 0.44157 | 1.93828 |
| n_g | 0.435835 | 1.94064 |
| n_h | 0.404656 | 1.95587 |
| n_i | 0.365015 | |

| Partial Dispersions | |
|---------------------|----------|
| n_C-n_t | 0.020392 |
| $n_C-n_{A'}$ | 0.009182 |
| n_d-n_C | 0.008479 |
| n_e-n_C | 0.015364 |
| n_g-n_d | 0.037938 |
| n_g-n_F | 0.017302 |
| n_h-n_g | 0.015233 |
| n_i-n_g | |
| n_C-n_t | 0.021717 |
| $n_e-n_{C'}$ | 0.014039 |
| $n_{F'}-n_e$ | 0.015514 |
| $n_i-n_{F'}$ | |

| Relative Partial Dispersions | |
|------------------------------|--------|
| $\theta_{C,t}$ | 0.7004 |
| $\theta_{C,A'}$ | 0.3154 |
| $\theta_{d,C}$ | 0.2912 |
| $\theta_{e,C}$ | 0.5277 |
| $\theta_{g,d}$ | 1.3030 |
| $\theta_{g,F}$ | 0.5943 |
| $\theta_{h,g}$ | 0.5232 |
| $\theta_{i,g}$ | |
| $\theta'_{C,t}$ | 0.7348 |
| $\theta'_{e,C'}$ | 0.4750 |
| $\theta'_{F',e}$ | 0.5250 |
| $\theta'_{i,F}$ | |

| Thermal Properties | |
|---|-------|
| Strain Point StP (°C) | |
| Annealing Point AP (°C) | |
| Transformation Temperature Tg (°C) | 578 |
| Yield Point At (°C) | 610 |
| Softening Point SP (°C) | |
| Expansion Coefficients (-30~+70°C) | 61 |
| α (10 ⁻⁷ /°C) (+100~+300°C) | 76 |
| Thermal Conductivity k (W/m-K) | 0.838 |

| Coloring | | | |
|----------------|----|-------------|----|
| λ_{80} | | λ_5 | 36 |
| λ_{70} | 41 | | |

| Internal Transmittance | |
|------------------------|----------------------|
| $\lambda(\text{nm})$ | $\tau_{10\text{mm}}$ |
| 280 | |
| 290 | |
| 300 | |
| 310 | |
| 320 | |
| 330 | |
| 340 | |
| 350 | |
| 360 | 0.05 |
| 370 | 0.28 |
| 380 | 0.55 |
| 390 | 0.72 |
| 400 | 0.82 |
| 420 | 0.909 |
| 440 | 0.945 |
| 460 | 0.963 |
| 480 | 0.975 |
| 500 | 0.982 |
| 550 | 0.993 |
| 600 | 0.996 |
| 650 | 0.997 |
| 700 | 0.999 |
| 800 | 0.999 |
| 900 | 0.999 |
| 1000 | 0.999 |
| 1200 | 0.999 |
| 1400 | 0.999 |
| 1600 | 0.998 |
| 1800 | 0.992 |
| 2000 | 0.974 |
| 2200 | 0.92 |
| 2400 | 0.741 |

| Deviation of Relative Dispersions $\Delta\theta$ from "Normal" | |
|--|--------|
| $\Delta\theta_{C,t}$ | 0.0083 |
| $\Delta\theta_{C,A'}$ | 0.0020 |
| $\Delta\theta_{g,d}$ | 0.0027 |
| $\Delta\theta_{g,F}$ | 0.0030 |
| $\Delta\theta_{i,g}$ | |

| Mechanical Properties | |
|--|---------|
| Young's Modulus E (10 ⁸ N/m ²) | 1088 |
| Rigidity Modulus G (10 ⁸ N/m ²) | 418 |
| Poisson's Ratio σ | 0.302 |
| Knoop Hardness Hk[Class] | 650 7 |
| Abrasion Aa | 97 |
| Photoelastic Constant β (nm/cm/10 ⁵ Pa) | 1.83 |

| Constants of Dispersion Formula | |
|---------------------------------|----------------|
| A ₁ | 2.11102709E+00 |
| A ₂ | 3.70368094E-01 |
| A ₃ | 1.62687484E+00 |
| B ₁ | 1.20714135E-02 |
| B ₂ | 5.32464416E-02 |
| B ₃ | 1.09166396E+02 |

| Chemical Properties | |
|---|-----|
| Water Resistance(Powder) Group RW(P) | 1 |
| Acid Resistance(Powder) Group RA(P) | 3 |
| Weathering Resistance(Surface) Group W(S) | 3 |
| Acid Resistance(Surface) Group SR | 4.2 |
| Phosphate Resistance PR | 2.0 |

| Other Properties | |
|------------------------|------|
| Bubble Quality Group B | |
| Specific Gravity d | 4.90 |
| 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 | 4.0 | 5.1 | 5.1 | 5.5 | 6.0 | 7.1 | 8.4 |
| -20~ 0 | 4.0 | 5.1 | 5.2 | 5.6 | 6.1 | 7.3 | 8.7 |
| 0~20 | 4.0 | 5.2 | 5.3 | 5.7 | 6.3 | 7.5 | 9.0 |
| 20~40 | 4.1 | 5.4 | 5.4 | 5.8 | 6.4 | 7.8 | 9.3 |
| 40~60 | 4.2 | 5.5 | 5.6 | 6.0 | 6.6 | 8.0 | 9.6 |
| 60~80 | 4.4 | 5.7 | 5.8 | 6.3 | 6.9 | 8.4 | 10.0 |