

| | | | |
|-----------------------------|-----------------|---------------|------------------------------|
| H-LaK51A 697555 | $n_d = 1.69680$ | $v_d = 55.46$ | $n_F - n_C = 0.012564$ |
| | $n_e = 1.69980$ | $v_e = 55.25$ | $n_{F'} - n_{C'} = 0.012667$ |

| Refractive Indices | | |
|--------------------|----------------|-------------|
| | λ (nm) | n_λ |
| n_{2325} | 2325.42 | |
| n_{1970} | 1970.09 | |
| n_{1530} | 1529.58 | |
| n_{1129} | 1128.64 | |
| n_{1064} | 1064.00 | 1.68155 |
| n_t | 1013.98 | 1.68252 |
| n_s | 852.11 | 1.68615 |
| $n_{A'}$ | 768.19 | 1.68860 |
| n_r | 706.52 | 1.69080 |
| n_C | 656.27 | 1.69297 |
| $n_{C'}$ | 643.85 | 1.69358 |
| n_{He-Ne} | 632.80 | 1.69417 |
| n_D | 589.29 | 1.69670 |
| n_d | 587.56 | 1.69680 |
| n_e | 546.07 | 1.69980 |
| n_F | 486.13 | 1.70553 |
| $n_{F'}$ | 479.99 | 1.70625 |
| n_g | 435.84 | 1.71234 |
| n_h | 404.66 | 1.71799 |
| n_i | 365.01 | 1.72764 |

| Relative Partial Dispersion | |
|-----------------------------|--------|
| $P_{d,C}$ | 0.3048 |
| $P_{e,d}$ | 0.2388 |
| $P_{g,F}$ | 0.5420 |
| $P'_{d,c'}$ | 0.2542 |
| $P'_{e,d}$ | 0.2368 |
| $P'_{g,F'}$ | 0.4808 |

| Chemical Properties (grade) | |
|-----------------------------|---|
| RC (S) | 1 |
| RA (S) | 3 |
| D_W | 1 |
| D_A | 3 |
| R_{OH} (S) | 1 |
| RP (S) | 2 |

| Internal Transmittance | | |
|------------------------|--------------|---------------|
| λ (nm) | τ_{5mm} | τ_{10mm} |
| 2400 | 0.742 | 0.550 |
| 2200 | 0.904 | 0.817 |
| 2000 | 0.980 | 0.960 |
| 1800 | 0.997 | 0.994 |
| 1600 | 0.999 | 0.998 |
| 1400 | 0.999 | 0.998 |
| 1200 | 0.999 | 0.998 |
| 1060 | 0.999 | 0.998 |
| 1000 | 0.999 | 0.998 |
| 950 | 0.999 | 0.998 |
| 900 | 0.999 | 0.998 |
| 850 | 0.999 | 0.998 |
| 800 | 0.999 | 0.998 |
| 750 | 0.999 | 0.998 |
| 700 | 0.999 | 0.998 |
| 650 | 0.999 | 0.998 |
| 600 | 0.999 | 0.998 |
| 550 | 0.999 | 0.998 |
| 500 | 0.999 | 0.998 |
| 480 | 0.998 | 0.997 |
| 460 | 0.997 | 0.995 |
| 440 | 0.996 | 0.993 |
| 420 | 0.995 | 0.990 |
| 400 | 0.993 | 0.986 |
| 390 | 0.990 | 0.981 |
| 380 | 0.986 | 0.973 |
| 370 | 0.979 | 0.959 |
| 360 | 0.966 | 0.933 |
| 350 | 0.946 | 0.895 |
| 340 | 0.915 | 0.838 |
| 330 | 0.872 | 0.760 |
| 320 | 0.812 | 0.659 |
| 310 | 0.735 | 0.540 |
| 300 | 0.643 | 0.413 |
| 290 | 0.537 | 0.288 |
| 280 | 0.405 | 0.164 |

| Deviation of Relative Partial Dispersions | |
|---|---------|
| $\Delta P_{F,e}$ | -0.0035 |
| $\Delta P_{g,F}$ | -0.0095 |
| $\Delta P_{C,t}$ | 0.0229 |
| $\Delta P_{C,s}$ | 0.0093 |

| Expansion Coefficient α ($\times 10^{-7}/K$) | |
|---|----------|
| $^{\circ}C$ | α |
| -50/-40 | 51 |
| -40/-30 | 52 |
| -30/-20 | 53 |
| -20/-10 | 55 |
| -10/0 | 56 |
| 0/10 | 57 |
| 10/20 | 58 |
| 20/30 | 59 |
| 30/40 | 60 |
| 40/50 | 61 |
| 50/60 | 62 |
| 60/70 | 63 |
| 70/80 | 64 |
| 80/90 | 64 |
| 90/100 | 65 |
| 100/110 | 66 |
| 110/120 | 67 |
| 120/130 | 68 |
| 130/140 | 70 |
| 140/150 | 71 |
| 150/160 | 72 |

| Thermal Properties | |
|---|------|
| T_g ($^{\circ}C$) | 648 |
| T_s ($^{\circ}C$) | 675 |
| $T_{10}^{14.5}$ ($^{\circ}C$) | 589 |
| T_{10}^{13} ($^{\circ}C$) | 624 |
| $\alpha_{50/80^{\circ}C}$ ($10^{-7}/K$) | 58 |
| $\alpha_{100/300^{\circ}C}$ ($10^{-7}/K$) | 75 |
| λ (W/(m·K)) | 0.92 |

| Mechanical Properties | |
|-----------------------|-------|
| HK ($10^7 Pa$) | 608 |
| F_A | 119 |
| E (GPa) | 111.4 |
| G (GPa) | 43.3 |
| μ | 0.288 |
| σ_b (MPa) | 107.0 |
| B ($10^{-12}/Pa$) | |

| Constants of Dispersion Formula | |
|---------------------------------|-----------------|
| A_0 | 2.82835724E+00 |
| A_1 | -1.49967196E-02 |
| A_2 | 1.78960905E-02 |
| A_3 | 5.80447845E-04 |
| A_4 | -3.68202672E-05 |
| A_5 | 2.18285424E-06 |

| Density | | Solarization | |
|-----------------------------|------|---------------------|------|
| ρ (g/cm ³) | 3.65 | $\Delta\lambda$ (%) | -3.5 |

| Range of Temperature ($^{\circ}C$) | Temperature Coefficients of Refractive Index | | | | | | | | | |
|--------------------------------------|---|-----|-----|-----|-------|-----|-----|-----|-----|-----|
| | dn/dt relative ($\times 10^{-6} / ^{\circ}C$) | | | | | | | | | |
| | t | s | C | C' | He-Ne | d | e | F | F' | g |
| -60 ~ -40 | 1.6 | 2.0 | 2.1 | 2.2 | 2.4 | 2.6 | 3.0 | 3.1 | 3.2 | 3.5 |
| -40 ~ -20 | 1.6 | 2.0 | 2.2 | 2.3 | 2.4 | 2.7 | 3.0 | 3.1 | 3.2 | 3.6 |
| -20 ~ 0 | 1.6 | 2.2 | 2.3 | 2.3 | 2.4 | 2.8 | 3.2 | 3.3 | 3.3 | 3.8 |
| 0 ~ 20 | 1.7 | 2.3 | 2.4 | 2.5 | 2.5 | 2.9 | 3.2 | 3.3 | 3.3 | 4.0 |
| 20 ~ 40 | 1.7 | 2.3 | 2.5 | 2.6 | 2.7 | 3.1 | 3.3 | 3.4 | 3.4 | 4.2 |
| 40 ~ 60 | 1.8 | 2.4 | 2.7 | 2.7 | 2.8 | 3.1 | 3.4 | 3.5 | 3.5 | 4.3 |
| 60 ~ 80 | 1.8 | 2.4 | 2.8 | 2.8 | 2.9 | 3.3 | 3.6 | 3.7 | 3.8 | 4.6 |
| 80 ~ 100 | 2.0 | 2.6 | 3.0 | 3.1 | 3.2 | 3.4 | 3.8 | 3.9 | 3.9 | 4.8 |
| 100 ~ 120 | 2.1 | 2.7 | 3.2 | 3.2 | 3.2 | 3.4 | 4.0 | 4.1 | 4.1 | 4.9 |
| 120 ~ 140 | 2.1 | 2.8 | 3.2 | 3.2 | 3.2 | 3.5 | 4.0 | 4.2 | 4.3 | 5.1 |
| 140 ~ 160 | 2.2 | 2.9 | 3.3 | 3.4 | 3.4 | 3.6 | 4.2 | 4.4 | 4.4 | 5.2 |

| Coloration Code | |
|--|---------|
| $\lambda_{80}(\lambda_{70})/\lambda_5$ | 360/270 |
| Coloration of Internal Transmittance | |
| $\lambda\tau_{80}/\lambda\tau_5$ | 335/273 |

| Constants of dn/dt | | |
|--------------------|----------|----------------|
| D_0 | D_1 | D_2 |
| -2.78E-07 | 1.33E-08 | -2.35E-11 |
| E_0 | E_1 | λ_{TK} |
| 8.64E-07 | 8.98E-10 | 4.82E-15 |