

| | | | |
|------------------------------|-----------------|---------------|------------------------------|
| H-LaF54 800423 | $n_d = 1.79950$ | $v_d = 42.34$ | $n_F - n_C = 0.018883$ |
| | $n_e = 1.80399$ | $v_e = 42.09$ | $n_{F'} - n_{C'} = 0.019101$ |

| Refractive Indices | | |
|--------------------|----------------------|-------------|
| | $\lambda(\text{nm})$ | n_λ |
| n_{2325} | 2325.42 | 1.75473 |
| n_{1970} | 1970.09 | 1.76179 |
| n_{1530} | 1529.58 | 1.76966 |
| n_{1129} | 1128.64 | 1.77705 |
| n_t | 1013.98 | 1.77963 |
| n_s | 852.11 | 1.78432 |
| $n_{A'}$ | 768.19 | 1.78763 |
| n_r | 706.52 | 1.79073 |
| n_C | 656.27 | 1.79388 |
| $n_{C'}$ | 643.85 | 1.79476 |
| $n_{\text{He-Ne}}$ | 632.80 | 1.79559 |
| n_D | 589.29 | 1.79934 |
| n_d | 587.56 | 1.79950 |
| n_e | 546.07 | 1.80399 |
| n_F | 486.13 | 1.81276 |
| $n_{F'}$ | 479.99 | 1.81386 |
| n_g | 435.84 | 1.82345 |
| n_h | 404.66 | 1.83254 |
| n_i | 365.01 | 1.84858 |

| Constants of Dispersion Formula | |
|---------------------------------|-----------------|
| A_0 | 3.15463077E+00 |
| A_1 | -1.49142692E-02 |
| A_2 | 2.73983671E-02 |
| A_3 | 1.30082902E-03 |
| A_4 | -8.39080192E-05 |
| A_5 | 6.66808513E-06 |

| Relative Partial Dispersions | | | |
|------------------------------|--------|-------------|--------|
| $P_{d,C}$ | 0.2977 | $P'_{d,C'}$ | 0.2482 |
| $P_{e,d}$ | 0.2378 | $P'_{e,d}$ | 0.2351 |
| $P_{g,F}$ | 0.5662 | $P'_{g,F'}$ | 0.5021 |

| Range of Temperature (°C) | Temperature Coefficients of Refractive Index | | | | | | |
|---------------------------|---|-----|-------|-----|-----|-----|------|
| | dn/dt relative ($10^{-6} / ^\circ\text{C}$) | | | | | | |
| | t | C' | He-Ne | D | e | F' | g |
| -40 ~ -20 | 6.6 | 7.5 | 7.5 | 7.7 | 8.1 | 8.8 | 9.5 |
| -20 ~ 0 | 6.9 | 7.7 | 7.8 | 8.0 | 8.4 | 9.1 | 9.9 |
| 0 ~ 20 | 7.0 | 7.9 | 7.9 | 8.2 | 8.6 | 9.3 | 10.2 |
| 20 ~ 40 | 7.0 | 7.9 | 8.0 | 8.2 | 8.6 | 9.4 | 10.3 |
| 40 ~ 60 | 7.0 | 8.0 | 8.0 | 8.3 | 8.7 | 9.5 | 10.4 |
| 60 ~ 80 | 7.2 | 8.1 | 8.2 | 8.5 | 8.9 | 9.8 | 10.7 |

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

| Thermal Properties | |
|--|-----|
| $T_g(^{\circ}\text{C})$ | 595 |
| $T_s(^{\circ}\text{C})$ | 632 |
| $T_{10}^{14.5}(^{\circ}\text{C})$ | 539 |
| $T_{10}^{13}(^{\circ}\text{C})$ | 580 |
| $\alpha_{-50/80^{\circ}\text{C}}(10^{-7}/\text{K})$ | 53 |
| $\alpha_{100/300^{\circ}\text{C}}(10^{-7}/\text{K})$ | 68 |

| Mechanical Properties | |
|--|-------|
| HK(10^7Pa) | 630 |
| F_A | 84 |
| $E(10^7\text{Pa})$ | 11534 |
| $G(10^7\text{Pa})$ | 4433 |
| μ | 0.301 |
| $B(\text{nm}/\text{cm}/10^5\text{Pa})$ | 2.280 |

| Density | |
|------------------------------|------|
| $\rho(\text{g}/\text{cm}^3)$ | 4.40 |

| Deviation of Relative Partial Dispersions | |
|---|---------|
| $\Delta P_{F,e}$ | -0.0023 |
| $\Delta P_{g,F}$ | -0.0071 |
| $\Delta P_{C,t}$ | 0.0095 |
| $\Delta P_{C,s}$ | 0.0043 |

| Internal Transmittance | | |
|------------------------|---------------------|----------------------|
| $\lambda(\text{nm})$ | $\tau_{5\text{mm}}$ | $\tau_{10\text{mm}}$ |
| 2400 | 0.811 | 0.658 |
| 2200 | 0.944 | 0.891 |
| 2000 | 0.990 | 0.980 |
| 1800 | 0.999 | 0.998 |
| 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 |
| 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 | 0.997 | 0.996 |
| 460 | 0.995 | 0.994 |
| 440 | 0.993 | 0.992 |
| 420 | 0.991 | 0.986 |
| 400 | 0.984 | 0.973 |
| 390 | 0.978 | 0.960 |
| 380 | 0.966 | 0.935 |
| 370 | 0.941 | 0.890 |
| 360 | 0.900 | 0.811 |
| 350 | 0.815 | 0.665 |
| 340 | 0.638 | 0.408 |
| 330 | 0.316 | 0.102 |
| 320 | 0.048 | 0.011 |
| 310 | | |
| 300 | | |
| 290 | | |
| 280 | | |

| Coloration Code | |
|--|---------|
| $\lambda_{80}(\lambda_{70})/\lambda_5$ | 390/330 |

| Coloration of Internal Transmittance | |
|--------------------------------------|---------|
| $\lambda\tau_{80}/\lambda\tau_5$ | 358/327 |