

| | | | | |
|------------------|---------------|-----------------|---------------|------------------------|
| H-ZLaF60A | 850323 | $n_d = 1.85026$ | $v_d = 32.27$ | $n_F - n_C = 0.026349$ |
| | | $n_e = 1.85649$ | $v_e = 32.05$ | $n_F - n_C = 0.026727$ |

| Refractive Indices | | |
|--------------------|----------------|-------------|
| | λ (nm) | n_λ |
| n_{2325} | 2325.42 | |
| n_{1970} | 1970.09 | |
| n_{1530} | 1529.58 | |
| n_{1129} | 1128.64 | 1.82128 |
| n_{1064} | 1064.00 | 1.82287 |
| n_t | 1013.98 | 1.82426 |
| n_s | 852.11 | 1.83001 |
| $n_{A'}$ | 768.19 | 1.83428 |
| n_f | 706.52 | 1.83837 |
| n_C | 656.27 | 1.84259 |
| $n_{C'}$ | 643.85 | 1.84379 |
| n_{He-Ne} | 632.80 | 1.84491 |
| n_D | 589.29 | 1.85003 |
| n_d | 587.56 | 1.85026 |
| n_e | 546.07 | 1.85649 |
| n_F | 486.13 | 1.86893 |
| $n_{F'}$ | 479.99 | 1.87052 |
| n_g | 435.84 | 1.88455 |
| n_h | 404.66 | 1.89826 |
| n_i | 365.01 | 1.92358 |
| | | |
| | | |

| Relative Partial Dispersion | |
|-----------------------------|--------|
| $P_{d,C}$ | 0.2911 |
| $P_{e,d}$ | 0.2364 |
| $P_{g,F}$ | 0.5928 |
| $P'_{d,c'}$ | 0.2421 |
| $P'_{e,d}$ | 0.2331 |
| $P'_{g,F'}$ | 0.5249 |
| | |

| Chemical Properties (grade) | |
|-----------------------------|---|
| RC (S) | 1 |
| RA (S) | 1 |
| D _w | 1 |
| D _A | 1 |
| R _{OH} (S) | 1 |
| RP (S) | 1 |
| CR | 1 |

| Internal Transmittance | | |
|------------------------|--------------|---------------|
| λ (nm) | τ_{5mm} | τ_{10mm} |
| 2400 | 0.969 | 0.939 |
| 2200 | 0.987 | 0.974 |
| 2000 | 0.995 | 0.989 |
| 1800 | 0.997 | 0.993 |
| 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 | 0.998 | 0.996 |
| 550 | 0.996 | 0.993 |
| 500 | 0.990 | 0.980 |
| 480 | 0.986 | 0.972 |
| 460 | 0.980 | 0.961 |
| 440 | 0.971 | 0.944 |
| 420 | 0.954 | 0.910 |
| 400 | 0.913 | 0.833 |
| 390 | 0.872 | 0.761 |
| 380 | 0.797 | 0.635 |
| 370 | 0.640 | 0.410 |
| 360 | 0.355 | 0.126 |
| 350 | | |
| 340 | | |
| 330 | | |
| 320 | | |
| 310 | | |
| 300 | | |
| 290 | | |
| 280 | | |

| Deviation of Relative Partial Dispersions | |
|---|---------|
| $\Delta P_{F,e}$ | -0.0003 |
| $\Delta P_{g,F}$ | 0.0028 |
| $\Delta P_{C,t}$ | -0.0008 |
| $\Delta P_{C,s}$ | -0.0004 |

| Expansion Coefficient α ($\times 10^{-7}/K$) | |
|---|----------|
| $^{\circ}C$ | α |
| -50/-40 | 57 |
| -40/-30 | 59 |
| -30/-20 | 60 |
| -20/-10 | 60 |
| -10/0 | 64 |
| 0/10 | 64 |
| 10/20 | 65 |
| 20/30 | 65 |
| 30/40 | 65 |
| 40/50 | 66 |
| 50/60 | 66 |
| 60/70 | 68 |
| 70/80 | 69 |
| 80/90 | 69 |
| 90/100 | 71 |
| 100/110 | 71 |
| 110/120 | 72 |
| 120/130 | 75 |
| 130/140 | 76 |
| 140/150 | 76 |
| 150/160 | 79 |

| Thermal Properties | |
|---|------|
| T _g ($^{\circ}C$) | 743 |
| T _s ($^{\circ}C$) | 795 |
| T ₁₀ ^{14.5} ($^{\circ}C$) | 682 |
| T ₁₀ ¹³ ($^{\circ}C$) | 704 |
| $\alpha_{-50/80^{\circ}C}$ ($10^{-7}/K$) | 65 |
| $\alpha_{100/300^{\circ}C}$ ($10^{-7}/K$) | 79 |
| λ (W/(m K)) | 0.87 |

| Constants of Dispersion Formula | |
|---------------------------------|-----------------|
| A ₀ | 3.30037670E+00 |
| A ₁ | -1.19927180E-02 |
| A ₂ | 3.94905653E-02 |
| A ₃ | 1.56664097E-03 |
| A ₄ | -4.50656039E-05 |
| A ₅ | 1.12714689E-05 |

| Mechanical Properties | |
|-----------------------|-------|
| HK (10^7 Pa) | 603 |
| F _A | 147 |
| E (GPa) | 111.4 |
| G (GPa) | 42.9 |
| μ | 0.299 |
| σ_b (MPa) | |
| B (10^{-12} /Pa) | 1.76 |

| Density | | Solarization | |
|-----------------------------|------|---------------------|------|
| ρ (g/cm ³) | 4.43 | $\Delta\lambda$ (%) | -0.3 |

| 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 | 2.5 | 2.8 | 3.1 | 3.2 | 3.4 | 3.8 | 4.3 | 4.9 | 5.2 | 6.3 |
| -40 ~ -20 | 2.5 | 2.8 | 3.2 | 3.3 | 3.4 | 3.9 | 4.5 | 5.1 | 5.3 | 6.6 |
| -20 ~ 0 | 2.7 | 3.0 | 3.3 | 3.4 | 3.6 | 4.2 | 4.7 | 5.3 | 5.6 | 6.8 |
| 0 ~ 20 | 2.7 | 3.0 | 3.4 | 3.5 | 3.6 | 4.2 | 4.8 | 5.5 | 5.7 | 7.1 |
| 20 ~ 40 | 2.8 | 3.2 | 3.6 | 3.7 | 3.8 | 4.4 | 5.0 | 5.7 | 5.9 | 7.3 |
| 40 ~ 60 | 2.8 | 3.3 | 3.7 | 3.7 | 3.8 | 4.5 | 5.2 | 5.9 | 6.1 | 7.6 |
| 60 ~ 80 | 2.9 | 3.5 | 3.8 | 4.0 | 4.1 | 4.7 | 5.3 | 6.1 | 6.3 | 7.9 |
| 80 ~ 100 | 2.9 | 3.7 | 4.1 | 4.2 | 4.3 | 5.0 | 5.6 | 6.2 | 6.4 | 8.2 |
| 100 ~ 120 | 3.0 | 3.8 | 4.2 | 4.3 | 4.5 | 5.2 | 5.7 | 6.5 | 6.7 | 8.4 |
| 120 ~ 140 | 3.1 | 4.0 | 4.4 | 4.5 | 4.6 | 5.3 | 5.9 | 6.7 | 7.0 | 8.6 |
| 140 ~ 160 | 3.1 | 4.2 | 4.6 | 4.7 | 4.8 | 5.5 | 6.1 | 6.9 | 7.1 | 8.9 |

| Coloration Code | |
|--|-----------|
| $\lambda_{80}(\lambda_{70})/\lambda_5$ | (400)/360 |
| Coloration of Internal Transmittance | |
| $\lambda\tau_{80}/\lambda\tau_5$ | 395/357 |

| Constants of dn/dt | | |
|--------------------|----------------|----------------|
| D ₀ | D ₁ | D ₂ |
| 6.73E-07 | 1.31E-08 | -2.05E-11 |
| E ₀ | E ₁ | λ_{TK} |
| 8.31E-07 | 7.05E-10 | 2.74E-01 |