

| | | | | |
|--------------|---------------|-----------------|---------------|------------------------------|
| H-ZF2 | 673322 | $n_d = 1.67270$ | $v_d = 32.17$ | $n_F - n_C = 0.020910$ |
| | | $n_e = 1.67764$ | $v_e = 31.92$ | $n_{F'} - n_{C'} = 0.021227$ |

| Refractive Indices | | |
|--------------------|----------------|-------------|
| | λ (nm) | n_λ |
| n_{2325} | 2325.42 | 1.63037 |
| n_{1970} | 1970.09 | 1.63613 |
| n_{1530} | 1529.58 | 1.64275 |
| n_{1129} | 1128.64 | 1.64942 |
| n_{1064} | 1064.00 | 1.65076 |
| n_t | 1013.98 | 1.65190 |
| n_s | 852.11 | 1.65659 |
| $n_{A'}$ | 768.19 | 1.66001 |
| n_r | 706.52 | 1.66327 |
| n_C | 656.27 | 1.66661 |
| $n_{C'}$ | 643.85 | 1.66756 |
| n_{He-Ne} | 632.80 | 1.66846 |
| n_D | 589.29 | 1.67252 |
| n_d | 587.56 | 1.67270 |
| n_e | 546.07 | 1.67764 |
| n_F | 486.13 | 1.68752 |
| $n_{F'}$ | 479.99 | 1.68879 |
| n_g | 435.84 | 1.70004 |
| n_h | 404.66 | 1.71115 |
| n_i | 365.01 | 1.73203 |

| Constants of Dispersion Formula | |
|---------------------------------|-----------------|
| A_0 | 2.71254884E+00 |
| A_1 | -1.09981079E-02 |
| A_2 | 2.69930833E-02 |
| A_3 | 1.44291354E-03 |
| A_4 | -8.34857219E-05 |
| A_5 | 1.26851609E-05 |

| Density | Solarization |
|-----------------------------|---------------------|
| ρ (g/cm ³) | $\Delta\lambda$ (%) |
| 2.90 | -0.2 |

| Relative Partial Dispersion | |
|-----------------------------|--------|
| $P_{d,C}$ | 0.2912 |
| $P_{e,d}$ | 0.2363 |
| $P_{g,F}$ | 0.5988 |
| $P'_{d,c'}$ | 0.2421 |
| $P'_{e,d}$ | 0.2327 |
| $P'_{g,F'}$ | 0.5300 |

| Deviation of Relative Partial Dispersions | |
|---|--------|
| $\Delta P_{F,e}$ | 0.0001 |
| $\Delta P_{g,F}$ | 0.0086 |
| $\Delta P_{C,t}$ | 0.0075 |
| $\Delta P_{C,s}$ | 0.0016 |

| Thermal Properties | |
|--|------|
| Tg (°C) | 592 |
| Ts (°C) | 627 |
| T ₁₀ ^{14.5} (°C) | 518 |
| T ₁₀ ¹³ (°C) | 560 |
| $\alpha_{50/80^\circ C}$ (10 ⁻⁷ /K) | 85 |
| $\alpha_{100/300^\circ C}$ (10 ⁻⁷ /K) | 107 |
| λ (W/(m·K)) | 1.20 |

| Mechanical Properties | |
|---------------------------|-------|
| HK (10 ⁷ Pa) | 569 |
| F _A | 140 |
| E (GPa) | 82.1 |
| G (GPa) | 33.2 |
| μ | 0.237 |
| σ_b (MPa) | 89 |
| B (10 ⁻¹² /Pa) | 2.53 |

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

| Expansion Coefficient α (×10 ⁻⁷ /K) | |
|---|----------|
| °C | α |
| -50/-40 | 76 |
| -40/-30 | 79 |
| -30/-20 | 80 |
| -20/-10 | 82 |
| -10/0 | 84 |
| 0/10 | 86 |
| 10/20 | 87 |
| 20/30 | 88 |
| 30/40 | 89 |
| 40/50 | 89 |
| 50/60 | 90 |
| 60/70 | 90 |
| 70/80 | 91 |
| 80/90 | 92 |
| 90/100 | 93 |
| 100/110 | 94 |
| 110/120 | 95 |
| 120/130 | 97 |
| 130/140 | 98 |
| 140/150 | 99 |
| 150/160 | 100 |

| Internal Transmittance | | |
|------------------------|--------------|---------------|
| λ (nm) | τ_{5mm} | τ_{10mm} |
| 2400 | 0.930 | 0.865 |
| 2200 | 0.952 | 0.906 |
| 2000 | 0.986 | 0.972 |
| 1800 | 0.996 | 0.992 |
| 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 | 0.997 | 0.993 |
| 500 | 0.995 | 0.989 |
| 480 | 0.993 | 0.987 |
| 460 | 0.991 | 0.984 |
| 440 | 0.989 | 0.979 |
| 420 | 0.986 | 0.970 |
| 400 | 0.971 | 0.937 |
| 390 | 0.943 | 0.883 |
| 380 | 0.868 | 0.747 |
| 370 | 0.655 | 0.426 |
| 360 | 0.225 | 0.052 |
| 350 | | |
| 340 | | |
| 330 | | |
| 320 | | |
| 310 | | |
| 300 | | |
| 290 | | |
| 280 | | |

| Range of Temperature (°C) | Temperature Coefficients of Refractive Index | | | | | | | | | |
|---------------------------|--|-----|-----|-----|-------|-----|-----|-----|-----|-----|
| | dn/dt relative (×10 ⁻⁶ / °C) | | | | | | | | | |
| | t | s | C | C' | He-Ne | d | e | F | F' | g |
| -60~-40 | 0.7 | 1.0 | 1.4 | 1.4 | 1.5 | 1.7 | 2.0 | 2.9 | 3.0 | 3.7 |
| -40~-20 | 0.7 | 1.0 | 1.4 | 1.4 | 1.4 | 1.8 | 2.0 | 2.9 | 3.0 | 3.8 |
| -20~0 | 0.7 | 1.1 | 1.4 | 1.5 | 1.5 | 1.8 | 2.1 | 3.0 | 3.1 | 4.0 |
| 0~20 | 0.7 | 1.1 | 1.5 | 1.5 | 1.6 | 1.8 | 2.2 | 3.1 | 3.2 | 4.2 |
| 20~40 | 0.7 | 1.1 | 1.5 | 1.5 | 1.6 | 1.8 | 2.3 | 3.3 | 3.3 | 4.5 |
| 40~60 | 0.7 | 1.3 | 1.6 | 1.6 | 1.7 | 2.1 | 2.5 | 3.5 | 3.6 | 4.5 |
| 60~80 | 0.9 | 1.4 | 1.7 | 1.8 | 1.8 | 2.3 | 2.5 | 3.7 | 3.8 | 4.8 |
| 80~100 | 0.9 | 1.5 | 1.8 | 1.9 | 2.0 | 2.4 | 2.7 | 4.0 | 4.0 | 4.9 |
| 100~120 | 1.0 | 1.6 | 2.0 | 2.1 | 2.1 | 2.6 | 2.8 | 4.1 | 4.1 | 5.1 |
| 120~140 | 1.2 | 1.8 | 2.2 | 2.3 | 2.3 | 2.8 | 3.1 | 4.2 | 4.3 | 5.2 |
| 140~160 | 1.2 | 1.8 | 2.3 | 2.4 | 2.4 | 2.9 | 3.3 | 4.3 | 4.4 | 5.5 |

| Coloration Code | |
|--|---------|
| $\lambda_{80}(\lambda_{70})/\lambda_5$ | 395/360 |
| Coloration of Internal Transmittance | |
| $\lambda\tau_{80}/\lambda\tau_5$ | 382/360 |

| Constants of dn/dt | | |
|--------------------|----------------|----------------|
| D ₀ | D ₁ | D ₂ |
| -2.44E-06 | 1.28E-08 | -1.52E-11 |
| E ₀ | E ₁ | λ_{TK} |
| 8.60E-07 | 6.85E-10 | 2.66E-01 |