

S-BSL7R

Code(d) **516639**

Code(e) **518637**

| | | | | | |
|------------------------|----------------------------|---------------------|--------------|-------------------------|-----------------|
| Refractive Index n_d | 1.51633 1.516330 | Abbe Number ν_d | 63.89 | Dispersion n_F-n_C | 0.008082 |
| Refractive Index n_e | 1.518258 | Abbe Number ν_e | 63.67 | Dispersion $n_F-n_{C'}$ | 0.008140 |

| Refractive Indices | | |
|------------------------|----------|---------|
| $\lambda(\mu\text{m})$ | | |
| n_{2325} | 2.32542 | 1.48860 |
| n_{1970} | 1.97009 | 1.49438 |
| n_{1530} | 1.52958 | 1.50037 |
| n_{1129} | 1.12864 | 1.50530 |
| n_t | 1.01398 | 1.50681 |
| n_s | 0.85211 | 1.50931 |
| $n_{A'}$ | 0.76819 | 1.51095 |
| n_r | 0.70652 | 1.51241 |
| n_C | 0.65627 | 1.51385 |
| $n_{C'}$ | 0.64385 | 1.51424 |
| $n_{\text{He-Ne}}$ | 0.6328 | 1.51461 |
| n_D | 0.58929 | 1.51626 |
| n_d | 0.58756 | 1.51633 |
| n_e | 0.54607 | 1.51826 |
| n_F | 0.48613 | 1.52193 |
| $n_{F'}$ | 0.47999 | 1.52238 |
| $n_{\text{He-Cd}}$ | 0.44157 | 1.52569 |
| n_g | 0.435835 | 1.52627 |
| n_h | 0.404656 | 1.52987 |
| n_i | 0.365015 | 1.53602 |

| Constants of Dispersion Formula | |
|---------------------------------|----------------|
| A_1 | 1.25482260E+00 |
| A_2 | 1.51111808E-02 |
| A_3 | 1.01493883E+00 |
| B_1 | 8.05680214E-03 |
| B_2 | 5.29921282E-02 |
| B_3 | 1.03372690E+02 |

| Chemical Properties | |
|---|-----|
| Water Resistance(Powder) Group RW(P) | 2 |
| Acid Resistance(Powder) Group RA(P) | 1 |
| Weathering Resistance(Surface) Group W(S) | 1 |
| Acid Resistance(Surface) Group SR | 1.0 |
| Phosphate Resistance PR | 1.0 |

| Mechanical Properties | |
|--------------------------|---------|
| Young's Modulus E (GPa) | 81.4 |
| Rigidity Modulus G (GPa) | 33.6 |
| Poisson's Ratio σ | 0.211 |
| Knoop Hardness Hk(Class) | 580 6 |
| Abrasion Aa | 93 |

| Partial Dispersions | |
|---------------------|----------|
| n_C-n_t | 0.007038 |
| $n_C-n_{A'}$ | 0.002897 |
| n_d-n_C | 0.002484 |
| n_e-n_C | 0.004412 |
| n_g-n_d | 0.009938 |
| n_g-n_F | 0.004340 |
| n_h-n_g | 0.003598 |
| n_i-n_g | 0.009755 |
| n_C-n_t | 0.007436 |
| $n_e-n_{C'}$ | 0.004014 |
| $n_{F'}-n_e$ | 0.004126 |
| $n_i-n_{F'}$ | 0.013639 |

| Relative Partial Dispersions | |
|------------------------------|--------|
| $\theta_{C,t}$ | 0.8708 |
| $\theta_{C,A'}$ | 0.3585 |
| $\theta_{d,C}$ | 0.3073 |
| $\theta_{e,C}$ | 0.5459 |
| $\theta_{g,d}$ | 1.2296 |
| $\theta_{g,F}$ | 0.5370 |
| $\theta_{h,g}$ | 0.4452 |
| $\theta_{i,g}$ | 1.2070 |
| $\theta'_{C,t}$ | 0.9135 |
| $\theta'_{e,C'}$ | 0.4931 |
| $\theta'_{F',e}$ | 0.5069 |
| $\theta'_{i,F'}$ | 1.6756 |

| Deviation of Relative Dispersions $\Delta\theta$ from "Normal" | |
|--|---------|
| $\Delta\theta_{C,t}$ | 0.0243 |
| $\Delta\theta_{C,A'}$ | 0.0052 |
| $\Delta\theta_{g,d}$ | -0.0024 |
| $\Delta\theta_{g,F}$ | -0.0011 |
| $\Delta\theta_{i,g}$ | 0.0170 |

| Thermal Properties | |
|--|-------|
| Strain Point StP (°C) | 535 |
| Annealing Point AP (°C) | 562 |
| Transformation Temperature Tg (°C) | 589 * |
| Yield Point At (°C) | 649 * |
| Softening Point SP (°C) | 724 |
| Expansion Coefficients (-30~+70°C) | 68 * |
| α (10 ⁻⁷ K ⁻¹) (+100~+300°C) | 83 * |
| Thermal Conductivity λ W/(m·K) | 1.16 |

| Coloring | | | |
|----------------|-----|-------------|-----|
| λ_{80} | 410 | λ_5 | 365 |
| λ_{70} | | | |

| Internal transmission | | | |
|-----------------------|-----|------------------|-----|
| $\lambda_{0.80}$ | 402 | $\lambda_{0.05}$ | 362 |

| CCI | | |
|------|------|------|
| B | G | R |
| 0.00 | 3.54 | 3.85 |

| Internal Transmittance | |
|------------------------|-------------|
| $\lambda(\text{nm})$ | τ 10mm |
| 280 | |
| 290 | |
| 300 | |
| 310 | |
| 320 | |
| 330 | |
| 340 | |
| 350 | |
| 360 | 0.02 |
| 370 | 0.18 |
| 380 | 0.44 |
| 390 | 0.66 |
| 400 | 0.79 |
| 420 | 0.915 |
| 440 | 0.953 |
| 460 | 0.967 |
| 480 | 0.974 |
| 500 | 0.979 |
| 550 | 0.987 |
| 600 | 0.991 |
| 650 | 0.994 |
| 700 | 0.997 |
| 800 | 0.999 |
| 900 | 0.999 |
| 1000 | 0.999 |
| 1200 | 0.999 |
| 1400 | 0.974 |
| 1600 | 0.992 |
| 1800 | 0.979 |
| 2000 | 0.955 |
| 2200 | 0.86 |
| 2400 | 0.81 |

| Temperature Coefficients of Refractive Index | | | | | | | |
|--|--|-----|-------|-----|-----|-----|-----|
| Range of Temperature (°C) | $\Delta n / \Delta T$ relative (10 ⁻⁶ K ⁻¹) | | | | | | |
| | t | C' | He-Ne | D | e | F' | g |
| -40~-20 | 2.5 | 2.8 | 2.8 | 2.9 | 3.0 | 3.3 | 3.5 |
| -20~ 0 | 2.5 | 2.8 | 2.8 | 2.9 | 3.1 | 3.3 | 3.6 |
| 0~20 | 2.6 | 2.9 | 2.9 | 3.0 | 3.1 | 3.4 | 3.7 |
| 20~40 | 2.6 | 3.0 | 3.0 | 3.1 | 3.2 | 3.5 | 3.8 |
| 40~60 | 2.7 | 3.1 | 3.1 | 3.2 | 3.3 | 3.6 | 3.9 |
| 60~80 | 2.8 | 3.2 | 3.2 | 3.3 | 3.5 | 3.8 | 4.1 |

| Other Properties | |
|--|------|
| Photoelastic Constant β nm/(cm·10 ⁵ Pa) | 2.86 |
| Specific Gravity d | 2.50 |
| Remarks | |

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※The name of the glass type is the model number assigned based on the main components of the composition: large, medium, small refractive index and serial number.