

L-BSL 7

Code(d) **516641**

Code(e) **518638**

| | | |
|------------------------|---------------------|-----------------------|
| Refractive Index n_d | Abbe Number ν_d | Dispersion n_F-n_C |
| 1.51633 1.516330 | 64.06 | 0.008060 |
| Refractive Index n_e | Abbe Number ν_e | Dispersion n_F-n_C' |
| 1.518253 | 63.87 | 0.008114 |

| Refractive Indices | | |
|------------------------|----------|---------|
| $\lambda(\mu\text{m})$ | | |
| n_{2325} | 2.32542 | 1.48810 |
| n_{1970} | 1.97009 | 1.49404 |
| n_{1530} | 1.52958 | 1.50020 |
| n_{1129} | 1.12864 | 1.50523 |
| n_t | 1.01398 | 1.50677 |
| n_s | 0.85211 | 1.50930 |
| $n_{A'}$ | 0.76819 | 1.51094 |
| n_r | 0.70652 | 1.51241 |
| n_C | 0.65627 | 1.51385 |
| $n_{C'}$ | 0.64385 | 1.51424 |
| $n_{\text{He-Ne}}$ | 0.6328 | 1.51462 |
| n_D | 0.58929 | 1.51626 |
| n_d | 0.58756 | 1.51633 |
| n_e | 0.54607 | 1.51825 |
| n_F | 0.48613 | 1.52191 |
| $n_{F'}$ | 0.47999 | 1.52236 |
| $n_{\text{He-Cd}}$ | 0.44157 | 1.52564 |
| n_g | 0.435835 | 1.52620 |
| n_h | 0.404656 | 1.52975 |
| n_i | 0.365015 | 1.53574 |

| Constants of Dispersion Formula | |
|---------------------------------|----------------|
| A_1 | 9.17473918E-01 |
| A_2 | 3.52687665E-01 |
| A_3 | 1.05579788E+00 |
| B_1 | 5.27701411E-03 |
| B_2 | 1.70809497E-02 |
| B_3 | 1.04302583E+02 |

| Chemical Properties | |
|---|-----|
| Water Resistance(Powder) Group RW(P) | 2 |
| Acid Resistance(Powder) Group RA(P) | 1 |
| Weathering Resistance(Surface) Group W(S) | 3 |
| Acid Resistance(Surface) Group SR | 1.0 |
| Phosphate Resistance PR | 1.2 |

| Mechanical Properties | |
|--------------------------|---------|
| Young's Modulus E (GPa) | 79.3 |
| Rigidity Modulus G (GPa) | 32.7 |
| Poisson's Ratio σ | 0.214 |
| Knoop Hardness Hk(Class) | 560 6 |
| Abrasion Aa | 72 |

| Partial Dispersions | |
|---------------------|----------|
| n_C-n_t | 0.007081 |
| $n_C-n_{A'}$ | 0.002904 |
| n_d-n_C | 0.002484 |
| n_e-n_C | 0.004407 |
| n_g-n_d | 0.009874 |
| n_g-n_F | 0.004298 |
| n_h-n_g | 0.003544 |
| n_i-n_g | 0.009541 |
| n_C-n_t | 0.007479 |
| $n_e-n_{C'}$ | 0.004009 |
| $n_{F'}-n_e$ | 0.004105 |
| $n_i-n_{F'}$ | 0.013387 |

| Relative Partial Dispersions | |
|------------------------------|--------|
| $\theta_{C,t}$ | 0.8785 |
| $\theta_{C,A'}$ | 0.3603 |
| $\theta_{d,C}$ | 0.3082 |
| $\theta_{e,C}$ | 0.5468 |
| $\theta_{g,d}$ | 1.2251 |
| $\theta_{g,F}$ | 0.5333 |
| $\theta_{h,g}$ | 0.4397 |
| $\theta_{i,g}$ | 1.1837 |
| $\theta'_{C,t}$ | 0.9217 |
| $\theta'_{e,C}$ | 0.4941 |
| $\theta'_{F',e}$ | 0.5059 |
| $\theta'_{i,F'}$ | 1.6499 |

| Deviation of Relative Dispersions $\Delta\theta$ from "Normal" | |
|--|---------|
| $\Delta \theta_{C,t}$ | 0.0312 |
| $\Delta \theta_{C,A'}$ | 0.0068 |
| $\Delta \theta_{g,d}$ | -0.0066 |
| $\Delta \theta_{g,F}$ | -0.0045 |
| $\Delta \theta_{i,g}$ | -0.0049 |

| Thermal Properties | |
|--|------|
| Strain Point StP (°C) | 464 |
| Annealing Point AP (°C) | 488 |
| Transformation Temperature Tg (°C) | 498 |
| Yield Point At (°C) | 549 |
| Softening Point SP (°C) | 630 |
| Expansion Coefficients (-30~+70°C) | 58 |
| α (10^{-7}K^{-1}) (+100~+300°C) | 71 |
| Thermal Conductivity λ W/(m·K) | 1.17 |

| Coloring | | | |
|----------------|-----|-------------|-----|
| λ_{80} | 330 | λ_5 | 295 |
| λ_{70} | | | |

| Internal transmission | | | |
|-----------------------|-----|------------------|-----|
| $\lambda_{0.80}$ | 326 | $\lambda_{0.05}$ | 299 |

| CCI | | |
|------|------|------|
| B | G | R |
| 0.00 | 0.08 | 0.09 |

| Internal Transmittance | |
|------------------------|-------------|
| $\lambda(\text{nm})$ | τ 10mm |
| 280 | |
| 290 | |
| 300 | 0.08 |
| 310 | 0.40 |
| 320 | 0.71 |
| 330 | 0.87 |
| 340 | 0.942 |
| 350 | 0.973 |
| 360 | 0.986 |
| 370 | 0.992 |
| 380 | 0.994 |
| 390 | 0.996 |
| 400 | 0.997 |
| 420 | 0.997 |
| 440 | 0.997 |
| 460 | 0.997 |
| 480 | 0.998 |
| 500 | 0.999 |
| 550 | 0.999 |
| 600 | 0.999 |
| 650 | 0.999 |
| 700 | 0.999 |
| 800 | 0.999 |
| 900 | 0.999 |
| 1000 | 0.999 |
| 1200 | 0.999 |
| 1400 | 0.974 |
| 1600 | 0.994 |
| 1800 | 0.988 |
| 2000 | 0.974 |
| 2200 | 0.87 |
| 2400 | 0.80 |

| 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 | 4.0 | 4.3 | 4.3 | 4.4 | 4.5 | 4.7 | 4.9 |
| -20~ 0 | 4.1 | 4.4 | 4.4 | 4.5 | 4.6 | 4.8 | 5.1 |
| 0~20 | 4.1 | 4.5 | 4.5 | 4.6 | 4.7 | 4.9 | 5.2 |
| 20~40 | 4.2 | 4.6 | 4.6 | 4.7 | 4.8 | 5.1 | 5.3 |
| 40~60 | 4.3 | 4.7 | 4.7 | 4.8 | 4.9 | 5.2 | 5.5 |
| 60~80 | 4.4 | 4.7 | 4.8 | 4.9 | 5.0 | 5.3 | 5.6 |

| Other Properties | |
|--|------|
| Photoelastic Constant β nm/(cm·10 ⁵ Pa) | 2.93 |
| Specific Gravity d | 2.38 |
| Remarks | |

OHARA 23-05

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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.