

J-SF4

$n_d = 1.755200$

$n_e = 1.761659$

$v_d = 27.57$

$v_e = 27.35$

| |
|----------------|
| Glass code (d) |
| 755276 |
| Glass code (e) |
| 762274 |

| Spectral l. | Refractive idx |
|-------------|----------------|
| 2.058 | 1.70897 |
| 1.970 | 1.71047 |
| 1.530 | 1.71783 |
| 1.129 | 1.72563 |
| 1.064 | 1.72725 |
| t | 1.72866 |
| s | 1.73450 |
| A' | 1.738835 |
| r | 1.743000 |
| C | 1.747305 |
| C' | 1.748535 |
| He-Ne | 1.749691 |
| D | 1.754963 |
| d | 1.755200 |
| e | 1.761659 |
| F | 1.774696 |
| F' | 1.776381 |
| g | 1.791384 |
| h | 1.806389 |
| 0.389 | 1.816164 |
| i | - |

| Coef. disp. form. (pwr ser.) | |
|------------------------------|-----------------|
| A0 | 2.96384442E+00 |
| A1 | -1.22384397E-02 |
| A2 | 0.00000000E+00 |
| A3 | 3.57090539E-02 |
| A4 | 2.72484712E-03 |
| A5 | -4.37315556E-04 |
| A6 | 1.03210102E-04 |
| A7 | -1.04209554E-05 |
| A8 | 5.02488681E-07 |

| Partial dispersion | |
|--------------------|----------|
| F-C | 0.027391 |
| F'-C' | 0.027846 |
| C-t | 0.018649 |
| C-A' | 0.008470 |
| d-C | 0.007895 |
| e-C | 0.014354 |
| g-d | 0.036184 |
| g-F | 0.016688 |
| h-g | 0.015005 |
| i-g | - |
| C'-t | 0.019879 |
| e-C' | 0.013124 |
| F'-e | 0.014722 |
| i-F' | - |

| Relative partial dispersion | |
|-----------------------------|--------|
| C-t/F-C | 0.6808 |
| C-A'/F-C | 0.3092 |
| d-C/F-C | 0.2882 |
| e-C/F-C | 0.5240 |
| g-d/F-C | 1.3210 |
| g-F/F-C | 0.6093 |
| h-g/F-C | 0.5478 |
| i-g/F-C | - |
| C'-t/F'-C' | 0.7139 |
| e-C'/F'-C' | 0.4713 |
| F'-e/F'-C' | 0.5287 |
| i-F'/F'-C' | - |

| Deviation of relative partial disp. | |
|-------------------------------------|---------|
| ΔPdC | -0.0014 |
| ΔPgF | 0.0112 |

| Internal CC (80%/5%) | |
|----------------------|------|
| 394/362 | |
| Color Code (80%/5%) | |
| 420/365 | |
| CCI | |
| B | 0.00 |
| G | 2.68 |
| R | 2.74 |

| Thermal properties | |
|--------------------------|-------|
| CTE(-30,70) [1E-7/°C] | 84 |
| CTE(100,300) [1E-7/°C] | 99 |
| Tg [°C] | 617 |
| At [°C] | 648 |
| StP [°C] | 560 |
| AP [°C] | 593 |
| SP [°C] | 711 |
| Ht condct. [W/m·K] | 1.040 |
| Sp. heat [kJ/kg·K] | 0.671 |
| Ht diffus. [1E-6 m2/sec] | 0.480 |

| Chemical properties [class] | |
|-----------------------------|---|
| Acid res. (surface) | 1 |
| Alkaline detergent res. | 1 |
| Climate resistance | 1 |
| Water res. (powder) | 2 |
| Acid res. (powder) | 1 |

| Mechanical properties | |
|--------------------------------------|---------|
| Knoop hardness | 504 (5) |
| Abrasion hardness | 145 |
| Young's mod. [GPa] | 91.2 |
| Shear mod. [GPa] | 36.5 |
| Poisson's ratio | 0.251 |
| Stress optical coef. [1E-5 nm/cm/Pa] | 2.75 |

| Internal trans. (10mm) | |
|------------------------|--------|
| λ [nm] | τ |
| 280 | - |
| 290 | - |
| 300 | - |
| 310 | - |
| 320 | - |
| 330 | - |
| 340 | - |
| 350 | - |
| 360 | 0.03 |
| 370 | 0.20 |
| 380 | 0.51 |
| 390 | 0.75 |
| 400 | 0.86 |
| 420 | 0.941 |
| 440 | 0.964 |
| 460 | 0.975 |
| 480 | 0.982 |
| 500 | 0.987 |
| 550 | 0.995 |
| 600 | 0.996 |
| 650 | 0.995 |
| 700 | 0.996 |
| 800 | 0.996 |
| 900 | 0.996 |
| 1000 | 0.996 |
| 1200 | 0.997 |
| 1400 | 0.997 |
| 1600 | 0.988 |
| 1800 | 0.971 |
| 2000 | 0.960 |
| 2200 | 0.922 |
| 2400 | 0.89 |

| Specific gravity |
|------------------|
| 3.22 |

| Relative $\Delta n / \Delta T$ [1E-6/°C] | | | | | | | | | | | | | | | | |
|--|-------|-----|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|-----|-----|-------|--|
| Temp. [°C] | 1.083 | t | s | A' | r | C | C' | He-Ne | d | e | F | F' | g | h | 0.389 | |
| 80 to 90 (ref.) | 0.7 | 0.7 | 1.0 | 1.3 | 1.7 | 2.0 | 2.1 | 2.2 | 2.6 | 3.2 | 4.5 | 4.7 | 6.5 | 8.8 | 10.5 | |
| 60 to 80 (ref.) | 0.6 | 0.6 | 0.9 | 1.2 | 1.5 | 1.8 | 1.9 | 2.0 | 2.5 | 3.0 | 4.2 | 4.4 | 6.2 | 8.4 | 10.0 | |
| 40 to 60 | 0.4 | 0.5 | 0.7 | 1.0 | 1.3 | 1.6 | 1.7 | 1.8 | 2.2 | 2.7 | 3.9 | 4.1 | 5.8 | 7.8 | 9.3 | |
| 20 to 40 | 0.3 | 0.4 | 0.6 | 0.9 | 1.2 | 1.5 | 1.6 | 1.6 | 2.0 | 2.5 | 3.6 | 3.8 | 5.4 | 7.3 | 8.7 | |
| 0 to 20 | 0.3 | 0.3 | 0.5 | 0.8 | 1.1 | 1.4 | 1.4 | 1.5 | 1.9 | 2.3 | 3.4 | 3.5 | 5.0 | 6.8 | 8.1 | |
| -20 to 0 | 0.2 | 0.3 | 0.5 | 0.8 | 1.0 | 1.3 | 1.4 | 1.4 | 1.8 | 2.2 | 3.2 | 3.3 | 4.7 | 6.4 | 7.6 | |
| -40 to -20 | 0.3 | 0.3 | 0.5 | 0.8 | 1.0 | 1.3 | 1.4 | 1.4 | 1.8 | 2.2 | 3.1 | 3.2 | 4.5 | 6.1 | 7.1 | |
| -60 to -40 (ref.) | 0.4 | 0.5 | 0.7 | 0.9 | 1.1 | 1.4 | 1.4 | 1.5 | 1.8 | 2.2 | 3.1 | 3.2 | 4.4 | 5.8 | 6.8 | |
| -70 to -60 (ref.) | 0.6 | 0.7 | 0.9 | 1.1 | 1.3 | 1.5 | 1.6 | 1.7 | 2.0 | 2.3 | 3.1 | 3.2 | 4.4 | 5.7 | 6.6 | |

| Absolute $\Delta n / \Delta T$ [1E-6/°C] | | | | | | | | | | | | | | | | |
|--|-------|------|------|------|------|------|------|-------|------|------|------|------|-----|-----|-------|--|
| Temp. [°C] | 1.083 | t | s | A' | r | C | C' | He-Ne | d | e | F | F' | g | h | 0.389 | |
| 80 to 90 | -0.4 | -0.3 | 0.0 | 0.3 | 0.6 | 0.9 | 1.0 | 1.1 | 1.6 | 2.1 | 3.4 | 3.6 | 5.4 | 7.7 | 9.3 | |
| 60 to 80 | -0.6 | -0.6 | -0.3 | 0.0 | 0.3 | 0.7 | 0.7 | 0.8 | 1.3 | 1.8 | 3.0 | 3.2 | 5.0 | 7.1 | 8.7 | |
| 40 to 60 | -0.9 | -0.8 | -0.6 | -0.3 | 0.0 | 0.3 | 0.4 | 0.5 | 0.9 | 1.4 | 2.5 | 2.7 | 4.4 | 6.4 | 7.9 | |
| 20 to 40 | -1.2 | -1.1 | -0.9 | -0.6 | -0.3 | 0.0 | 0.0 | 0.1 | 0.5 | 1.0 | 2.1 | 2.2 | 3.8 | 5.7 | 7.1 | |
| 0 to 20 | -1.5 | -1.4 | -1.2 | -0.9 | -0.7 | -0.4 | -0.3 | -0.2 | 0.1 | 0.6 | 1.6 | 1.7 | 3.2 | 5.0 | 6.2 | |
| -20 to 0 | -1.7 | -1.7 | -1.5 | -1.2 | -1.0 | -0.7 | -0.7 | -0.6 | -0.2 | 0.2 | 1.1 | 1.3 | 2.6 | 4.3 | 5.4 | |
| -40 to -20 | -2.0 | -2.0 | -1.8 | -1.6 | -1.3 | -1.1 | -1.0 | -0.9 | -0.6 | -0.2 | 0.6 | 0.8 | 2.1 | 3.6 | 4.6 | |
| -60 to -40 | -2.3 | -2.3 | -2.1 | -1.9 | -1.7 | -1.4 | -1.4 | -1.3 | -1.0 | -0.6 | 0.2 | 0.3 | 1.5 | 2.9 | 3.8 | |
| -70 to -60 | -2.5 | -2.5 | -2.3 | -2.1 | -1.9 | -1.7 | -1.6 | -1.6 | -1.3 | -1.0 | -0.2 | -0.1 | 1.0 | 2.3 | 3.2 | |

| Coef. disp. form. (frac. eq.) (ref.) | |
|--------------------------------------|----------------|
| P1 | 1.10339135E-01 |
| Q1 | 8.00300370E+01 |
| P2 | 2.34104129E-02 |
| Q2 | 6.14797788E-02 |
| P3 | 3.71956970E-01 |
| Q3 | 8.66099124E-03 |

| Fitting error of disp. form. σ [1E-6] | | |
|--|---------|----------|
| | Visible | Infrared |
| Power ser. eq. | 0.8 | 5.3 |
| Frac. eq. (ref.) | 2.5 | 10.1 |

| | |
|----------------------|---|
| Prod. Freq. (A to D) | B |
|----------------------|---|

| Similar glass type | | | |
|--------------------|--------|--------|---------------|
| OHARA | S-TIH4 | HOYA | E-FD4, E-FD4L |
| CDGM | H-ZF6 | SCHOTT | N-SF4 |

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|----------|--------------------|
| 2022-7-1 | StP, AP, SP |
| 2020-4-1 | Similar glass type |
| 2019-4-1 | Transmittance |