

J-F16

 $n_d = 1.592700$
 $n_e = 1.596673$
 $v_d = 35.27$
 $v_e = 35.00$

| |
|----------------|
| Glass code (d) |
| 593353 |
| Glass code (e) |
| 597350 |

| Spectral l. | Refractive idx |
|-------------|----------------|
| 2.058 | 1.56023 |
| 1.970 | 1.56153 |
| 1.530 | 1.56767 |
| 1.129 | 1.57358 |
| 1.064 | 1.57472 |
| t | 1.57570 |
| s | 1.57961 |
| A' | 1.582422 |
| r | 1.585077 |
| C | 1.587788 |
| C' | 1.588558 |
| He-Ne | 1.589281 |
| D | 1.592554 |
| d | 1.592700 |
| e | 1.596673 |
| F | 1.604592 |
| F' | 1.605607 |
| g | 1.614567 |
| h | 1.623384 |
| 0.389 | 1.629044 |
| i | 1.639866 |

| Coef. disp. form. (pwr ser.) | |
|------------------------------|-----------------|
| A0 | 2.47262695E+00 |
| A1 | -1.01687674E-02 |
| A2 | 0.00000000E+00 |
| A3 | 1.97436840E-02 |
| A4 | 1.81579852E-03 |
| A5 | -3.58960460E-04 |
| A6 | 7.21398135E-05 |
| A7 | -6.71121675E-06 |
| A8 | 2.80287467E-07 |

| Partial dispersion | |
|--------------------|----------|
| F-C | 0.016804 |
| F'-C' | 0.017049 |
| C-t | 0.012091 |
| C-A' | 0.005366 |
| d-C | 0.004912 |
| e-C | 0.008885 |
| g-d | 0.021867 |
| g-F | 0.009975 |
| h-g | 0.008817 |
| i-g | 0.025299 |
| C'-t | 0.012861 |
| e-C' | 0.008115 |
| F'-e | 0.008934 |
| i-F' | 0.034259 |

| Relative partial dispersion | |
|-----------------------------|--------|
| C-t/F-C | 0.7195 |
| C-A'/F-C | 0.3193 |
| d-C/F-C | 0.2923 |
| e-C/F-C | 0.5287 |
| g-d/F-C | 1.3013 |
| g-F/F-C | 0.5936 |
| h-g/F-C | 0.5247 |
| i-g/F-C | 1.5055 |
| C'-t/F'-C' | 0.7544 |
| e-C'/F'-C' | 0.4760 |
| F'-e/F'-C' | 0.5240 |
| i-F'/F'-C' | 2.0094 |

| Deviation of relative partial disp. | |
|-------------------------------------|---------|
| ΔPdC | -0.0008 |
| ΔPgF | 0.0084 |

| Internal CC (80%/5%) | |
|----------------------|------|
| 371/347 | |
| Color Code (80%/5%) | |
| 380/350 | |
| CCI | |
| B | 0.00 |
| G | 0.59 |
| R | 0.58 |

| Thermal properties | |
|--------------------------|-------|
| CTE(-30,70) [1E-7/°C] | 86 |
| CTE(100,300) [1E-7/°C] | 99 |
| Tg [°C] | 494 |
| At [°C] | 553 |
| StP [°C] | 443 |
| AP [°C] | 481 |
| SP [°C] | 632 |
| Ht condct. [W/m·K] | 0.968 |
| Sp. heat [kJ/kg·K] | 0.721 |
| Ht diffus. [1E-6 m2/sec] | 0.509 |

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

| Mechanical properties | |
|--------------------------------------|---------|
| Knoop hardness | 419 (4) |
| Abrasion hardness | 154 |
| Young's mod. [GPa] | 64.2 |
| Shear mod. [GPa] | 25.8 |
| Poisson's ratio | 0.245 |
| Stress optical coef. [1E-5 nm/cm/Pa] | 3.22 |

| Internal trans. (10mm) | | |
|------------------------|--------|--|
| λ [nm] | τ | |
| 280 | - | |
| 290 | - | |
| 300 | - | |
| 310 | - | |
| 320 | - | |
| 330 | - | |
| 340 | - | |
| 350 | 0.10 | |
| 360 | 0.43 | |
| 370 | 0.77 | |
| 380 | 0.913 | |
| 390 | 0.961 | |
| 400 | 0.977 | |
| 420 | 0.986 | |
| 440 | 0.987 | |
| 460 | 0.990 | |
| 480 | 0.992 | |
| 500 | 0.994 | |
| 550 | 0.997 | |
| 600 | 0.998 | |
| 650 | 0.996 | |
| 700 | 0.997 | |
| 800 | 0.996 | |
| 900 | 0.996 | |
| 1000 | 0.997 | |
| 1200 | 0.998 | |
| 1400 | 0.994 | |
| 1600 | 0.988 | |
| 1800 | 0.980 | |
| 2000 | 0.980 | |
| 2200 | 0.945 | |
| 2400 | 0.940 | |

| Specific gravity | |
|------------------|--|
| 2.64 | |

| 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.) | -0.5 | -0.4 | -0.3 | -0.1 | 0.1 | 0.3 | 0.4 | 0.4 | 0.7 | 1.0 | 1.8 | 1.9 | 2.9 | 4.0 | 4.8 | | |
| 60 to 80 (ref.) | -0.6 | -0.5 | -0.3 | -0.2 | 0.0 | 0.2 | 0.3 | 0.3 | 0.6 | 0.9 | 1.6 | 1.7 | 2.7 | 3.8 | 4.5 | | |
| 40 to 60 | -0.7 | -0.7 | -0.5 | -0.3 | -0.1 | 0.1 | 0.1 | 0.2 | 0.4 | 0.7 | 1.4 | 1.5 | 2.4 | 3.5 | 4.2 | | |
| 20 to 40 | -0.8 | -0.7 | -0.6 | -0.4 | -0.2 | -0.1 | 0.0 | 0.0 | 0.3 | 0.6 | 1.2 | 1.3 | 2.2 | 3.2 | 3.9 | | |
| 0 to 20 | -0.8 | -0.8 | -0.6 | -0.5 | -0.3 | -0.2 | -0.1 | -0.1 | 0.2 | 0.4 | 1.1 | 1.2 | 2.0 | 3.0 | 3.6 | | |
| -20 to 0 | -0.8 | -0.8 | -0.6 | -0.5 | -0.3 | -0.2 | -0.1 | -0.1 | 0.1 | 0.4 | 1.0 | 1.1 | 1.9 | 2.8 | 3.4 | | |
| -40 to -20 | -0.8 | -0.7 | -0.6 | -0.5 | -0.3 | -0.2 | -0.1 | -0.1 | 0.1 | 0.4 | 0.9 | 1.0 | 1.8 | 2.7 | 3.3 | | |
| -60 to -40 (ref.) | -0.6 | -0.6 | -0.5 | -0.3 | -0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.5 | 1.0 | 1.1 | 1.8 | 2.7 | 3.2 | | |
| -70 to -60 (ref.) | -0.4 | -0.4 | -0.3 | -0.1 | 0.0 | 0.1 | 0.2 | 0.2 | 0.4 | 0.6 | 1.1 | 1.2 | 1.9 | 2.7 | 3.3 | | |

| 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 | -1.4 | -1.4 | -1.2 | -1.0 | -0.9 | -0.7 | -0.6 | -0.5 | -0.3 | 0.0 | 0.8 | 0.9 | 1.9 | 3.0 | 3.8 | | |
| 60 to 80 | -1.6 | -1.6 | -1.4 | -1.2 | -1.1 | -0.9 | -0.8 | -0.8 | -0.5 | -0.2 | 0.5 | 0.6 | 1.6 | 2.7 | 3.4 | | |
| 40 to 60 | -1.9 | -1.8 | -1.7 | -1.5 | -1.3 | -1.2 | -1.1 | -1.1 | -0.8 | -0.5 | 0.2 | 0.2 | 1.2 | 2.2 | 2.9 | | |
| 20 to 40 | -2.1 | -2.1 | -1.9 | -1.8 | -1.6 | -1.4 | -1.4 | -1.4 | -1.1 | -0.8 | -0.2 | -0.1 | 0.8 | 1.8 | 2.4 | | |
| 0 to 20 | -2.4 | -2.3 | -2.2 | -2.0 | -1.9 | -1.7 | -1.7 | -1.6 | -1.4 | -1.2 | -0.5 | -0.5 | 0.4 | 1.3 | 2.0 | | |
| -20 to 0 | -2.6 | -2.6 | -2.5 | -2.3 | -2.2 | -2.0 | -2.0 | -1.9 | -1.7 | -1.5 | -0.9 | -0.8 | 0.0 | 0.9 | 1.5 | | |
| -40 to -20 | -2.9 | -2.9 | -2.7 | -2.6 | -2.5 | -2.3 | -2.3 | -2.2 | -2.0 | -1.8 | -1.3 | -1.2 | -0.4 | 0.4 | 1.0 | | |
| -60 to -40 | -3.1 | -3.1 | -3.0 | -2.9 | -2.7 | -2.6 | -2.6 | -2.5 | -2.3 | -2.1 | -1.6 | -1.5 | -0.8 | 0.0 | 0.5 | | |
| -70 to -60 | -3.3 | -3.3 | -3.2 | -3.1 | -2.9 | -2.8 | -2.8 | -2.7 | -2.6 | -2.4 | -1.9 | -1.8 | -1.1 | -0.4 | 0.2 | | |

| Coef. disp. form. (frac. eq.) (ref.) | |
|--------------------------------------|----------------|
| P1 | 9.48272387E-02 |
| Q1 | 6.81020799E+01 |
| P2 | 1.61938727E-02 |
| Q2 | 5.90567549E-02 |
| P3 | 3.12759244E-01 |
| Q3 | 7.46626033E-03 |

| Fitting error of disp. form. σ [1E-6] | | |
|--|---------|----------|
| | Visible | Infrared |
| Power ser. eq. | 0.8 | 8.0 |
| Frac. eq. (ref.) | 2.0 | 15.3 |

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

| Similar glass type | | | |
|--------------------|---------|--------|-----|
| OHARA | S-FTM16 | HOYA | FF5 |
| CDGM | - | SCHOTT | - |

| | |
|----------|---------------|
| 2022-7-1 | StP, AP, SP |
| 2019-4-1 | Transmittance |
| 2018-4-1 | Prod. Freq. |