

J-LAK14

$n_d = 1.696800$

$n_e = 1.699792$

$v_d = 55.52$

$v_e = 55.30$

| | |
|----------------|--------|
| Glass code (d) | 697555 |
| Glass code (e) | 700553 |

| Spectral l. | Refractive idx |
|-------------|----------------|
| 2.058 | 1.66396 |
| 1.970 | 1.66573 |
| 1.530 | 1.67367 |
| 1.129 | 1.68037 |
| 1.064 | 1.68155 |
| t | 1.68251 |
| s | 1.68615 |
| A' | 1.688581 |
| r | 1.690789 |
| C | 1.692974 |
| C' | 1.693585 |
| He-Ne | 1.694153 |
| D | 1.696688 |
| d | 1.696800 |
| e | 1.699792 |
| F | 1.705525 |
| F' | 1.706239 |
| g | 1.712340 |
| h | 1.718001 |
| 0.389 | 1.721457 |
| i | 1.727665 |

| Coef. disp. form. (pwr ser.) | |
|------------------------------|-----------------|
| A0 | 2.82679870E+00 |
| A1 | -1.40346783E-02 |
| A2 | -1.70936348E-04 |
| A3 | 1.89011366E-02 |
| A4 | 2.75933670E-04 |
| A5 | 5.15919094E-06 |
| A6 | 9.87059817E-08 |
| A7 | 0.00000000E+00 |
| A8 | 0.00000000E+00 |

| Partial dispersion | |
|--------------------|----------|
| F-C | 0.012551 |
| F'-C' | 0.012654 |
| C-t | 0.010465 |
| C-A' | 0.004393 |
| d-C | 0.003826 |
| e-C | 0.006818 |
| g-d | 0.015540 |
| g-F | 0.006815 |
| h-g | 0.005661 |
| i-g | 0.015325 |
| C'-t | 0.011076 |
| e-C' | 0.006207 |
| F'-e | 0.006447 |
| i-F' | 0.021426 |

| Relative partial dispersion | |
|-----------------------------|--------|
| C-t/F-C | 0.8338 |
| C-A'/F-C | 0.3500 |
| d-C/F-C | 0.3048 |
| e-C/F-C | 0.5432 |
| g-d/F-C | 1.2381 |
| g-F/F-C | 0.5430 |
| h-g/F-C | 0.4510 |
| i-g/F-C | 1.2210 |
| C'-t/F'-C' | 0.8753 |
| e-C'/F'-C' | 0.4905 |
| F'-e/F'-C' | 0.5095 |
| i-F'/F'-C' | 1.6932 |

| Deviation of relative partial disp. | |
|-------------------------------------|---------|
| ΔPdC | 0.0026 |
| ΔPgF | -0.0082 |

| | |
|------------------|------|
| Specific gravity | 3.63 |
|------------------|------|

| Thermal properties | |
|--------------------------|-------|
| CTE(-30,70) [1E-7/°C] | 56 |
| CTE(100,300) [1E-7/°C] | 70 |
| Tg [°C] | 662 |
| At [°C] | 686 |
| Ht condct. [W/m·K] | 0.971 |
| Sp. heat [kJ/kg·K] | 0.610 |
| Ht diffus. [1E-6 m2/sec] | 0.437 |

| Chemical properties [class] | |
|-----------------------------|---|
| Acid res. (surface) | 5 |
| Alkaline detergent res. | 4 |
| Climate resistance | 2 |
| Water res. (powder) | 2 |
| Acid res. (powder) | 4 |

| Mechanical properties | |
|--------------------------------------|---------|
| Knoop hardness | 644 (6) |
| Abrasion hardness | 114 |
| Young's mod. [GPa] | 109.0 |
| Shear mod. [GPa] | 42.3 |
| Poisson's ratio | 0.289 |
| Stress optical coef. [1E-5 nm/cm/Pa] | 1.90 |

| Color Code (80%/5%) | 370/290 |
|------------------------|---------|
| Internal CC | 349/285 |
| Internal trans. (10mm) | |
| λ [nm] | τ |
| 280 | - |
| 290 | 0.11 |
| 300 | 0.18 |
| 310 | 0.29 |
| 320 | 0.43 |
| 330 | 0.58 |
| 340 | 0.71 |
| 350 | 0.81 |
| 360 | 0.88 |
| 365 | 0.904 |
| 370 | 0.927 |
| 380 | 0.953 |
| 390 | 0.968 |
| 400 | 0.977 |
| 420 | 0.985 |
| 440 | 0.989 |
| 460 | 0.991 |
| 480 | 0.993 |
| 500 | 0.994 |
| 550 | 0.995 |
| 600 | 0.995 |
| 650 | 0.994 |
| 700 | 0.993 |
| 800 | 0.990 |
| 900 | 0.995 |
| 1000 | 0.996 |
| 1200 | 0.998 |
| 1400 | 0.997 |
| 1600 | 0.992 |
| 1800 | 0.980 |
| 2000 | 0.958 |
| 2200 | 0.88 |
| 2400 | 0.61 |

| 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.) | 3.1 | 3.2 | 3.3 | 3.5 | 3.6 | 3.7 | 3.7 | 3.8 | 3.9 | 4.1 | 4.4 | 4.5 | 4.9 | 5.3 | 5.6 |
| 60 to 80 (ref.) | 3.0 | 3.1 | 3.2 | 3.3 | 3.5 | 3.6 | 3.6 | 3.6 | 3.8 | 4.0 | 4.3 | 4.4 | 4.8 | 5.2 | 5.4 |
| 40 to 60 | 2.9 | 3.0 | 3.1 | 3.2 | 3.3 | 3.4 | 3.5 | 3.5 | 3.6 | 3.8 | 4.2 | 4.2 | 4.6 | 5.0 | 5.2 |
| 20 to 40 | 2.8 | 2.9 | 3.0 | 3.1 | 3.2 | 3.3 | 3.4 | 3.4 | 3.5 | 3.7 | 4.0 | 4.1 | 4.4 | 4.8 | 5.1 |
| 0 to 20 | 2.8 | 2.8 | 3.0 | 3.1 | 3.2 | 3.3 | 3.3 | 3.3 | 3.5 | 3.6 | 3.9 | 4.0 | 4.3 | 4.7 | 5.0 |
| -20 to 0 | 2.8 | 2.8 | 3.0 | 3.1 | 3.2 | 3.3 | 3.3 | 3.3 | 3.4 | 3.6 | 3.9 | 3.9 | 4.3 | 4.7 | 4.9 |
| -40 to -20 | 2.8 | 2.9 | 3.0 | 3.1 | 3.2 | 3.3 | 3.3 | 3.4 | 3.5 | 3.6 | 3.9 | 4.0 | 4.3 | 4.7 | 4.9 |
| -60 to -40 (ref.) | 3.0 | 3.0 | 3.2 | 3.3 | 3.4 | 3.5 | 3.5 | 3.5 | 3.6 | 3.8 | 4.1 | 4.1 | 4.5 | 4.8 | 5.0 |
| -70 to -60 (ref.) | 3.2 | 3.2 | 3.4 | 3.5 | 3.6 | 3.7 | 3.7 | 3.7 | 3.8 | 4.0 | 4.3 | 4.3 | 4.6 | 5.0 | 5.2 |

| 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 | 2.1 | 2.1 | 2.3 | 2.4 | 2.5 | 2.6 | 2.7 | 2.7 | 2.8 | 3.0 | 3.4 | 3.4 | 3.8 | 4.2 | 4.5 |
| 60 to 80 | 1.9 | 1.9 | 2.1 | 2.2 | 2.3 | 2.4 | 2.5 | 2.5 | 2.6 | 2.8 | 3.1 | 3.2 | 3.6 | 4.0 | 4.2 |
| 40 to 60 | 1.6 | 1.7 | 1.8 | 1.9 | 2.0 | 2.1 | 2.2 | 2.2 | 2.3 | 2.5 | 2.8 | 2.9 | 3.3 | 3.6 | 3.9 |
| 20 to 40 | 1.4 | 1.4 | 1.6 | 1.7 | 1.8 | 1.9 | 1.9 | 1.9 | 2.1 | 2.2 | 2.5 | 2.6 | 2.9 | 3.3 | 3.5 |
| 0 to 20 | 1.1 | 1.1 | 1.3 | 1.4 | 1.5 | 1.6 | 1.6 | 1.6 | 1.8 | 1.9 | 2.2 | 2.3 | 2.6 | 3.0 | 3.2 |
| -20 to 0 | 0.8 | 0.9 | 1.0 | 1.1 | 1.2 | 1.3 | 1.3 | 1.4 | 1.5 | 1.6 | 1.9 | 2.0 | 2.3 | 2.6 | 2.9 |
| -40 to -20 | 0.6 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | 1.0 | 1.1 | 1.2 | 1.3 | 1.6 | 1.6 | 2.0 | 2.3 | 2.5 |
| -60 to -40 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.7 | 0.8 | 0.8 | 0.9 | 1.0 | 1.3 | 1.3 | 1.7 | 2.0 | 2.2 |
| -70 to -60 | 0.1 | 0.2 | 0.3 | 0.4 | 0.4 | 0.5 | 0.6 | 0.6 | 0.7 | 0.8 | 1.1 | 1.1 | 1.4 | 1.7 | 1.9 |

| Coef. disp. form. (frac. eq.) (ref.) | |
|--------------------------------------|----------------|
| P1 | 1.29541724E-01 |
| Q1 | 7.14831691E+01 |
| P2 | 9.73740252E-02 |
| Q2 | 1.55700037E-02 |
| P3 | 2.81115754E-01 |
| Q3 | 3.25551411E-03 |

| Fitting error of disp. form. σ [1E-6] | | |
|--|---------|----------|
| | Visible | Infrared |
| Power ser. eq. | 0.7 | 4.0 |
| Frac. eq. (ref.) | 0.7 | 4.1 |

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

| Similar glass type | | | |
|--------------------|----------|--------|---------|
| OHARA | S-LAL14 | HOYA | LAC14 |
| CDGM | H-LAK51A | SCHOTT | N-LAK14 |

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| - | |
| 2015-4-1 | Color Code, Prod. Freq, Similar glass type |
| 2009-9-1 | 1st edition |