

SCHOTT N-BK 7® 517642.251

| | | |
|-----------------|---------------|------------------------------|
| $n_d = 1.51680$ | $v_d = 64.17$ | $n_F - n_C = 0.008054$ |
| $n_e = 1.51872$ | $v_e = 63.96$ | $n_{F'} - n_{C'} = 0.008110$ |

| Refractive Indices | | |
|--------------------|----------------|---------|
| | λ [nm] | |
| $n_{2325.4}$ | 2325.4 | 1.48921 |
| $n_{1970.1}$ | 1970.1 | 1.49495 |
| $n_{1529.6}$ | 1529.6 | 1.50091 |
| $n_{1060.0}$ | 1060.0 | 1.50669 |
| n_t | 1014.0 | 1.50731 |
| n_s | 852.1 | 1.50980 |
| n_r | 706.5 | 1.51289 |
| n_C | 656.3 | 1.51432 |
| $n_{C'}$ | 643.8 | 1.51472 |
| $n_{632.8}$ | 632.8 | 1.51509 |
| n_D | 589.3 | 1.51673 |
| n_d | 587.6 | 1.51680 |
| n_e | 546.1 | 1.51872 |
| n_F | 486.1 | 1.52238 |
| $n_{F'}$ | 480.0 | 1.52283 |
| n_g | 435.8 | 1.52668 |
| n_h | 404.7 | 1.53024 |
| n_i | 365.0 | 1.53627 |
| $n_{334.1}$ | 334.1 | 1.54272 |
| $n_{312.6}$ | 312.6 | 1.54862 |
| $n_{296.7}$ | 296.7 | |
| $n_{280.4}$ | 280.4 | |
| $n_{248.3}$ | 248.3 | |

| Internal Transmittance τ_i | | |
|---------------------------------|-----------------|-----------------|
| λ [nm] | τ_i (10mm) | τ_i (25mm) |
| 2500 | 0.665 | 0.360 |
| 2325 | 0.793 | 0.560 |
| 1970 | 0.933 | 0.840 |
| 1530 | 0.992 | 0.980 |
| 1060 | 0.999 | 0.997 |
| 700 | 0.998 | 0.996 |
| 660 | 0.998 | 0.994 |
| 620 | 0.998 | 0.994 |
| 580 | 0.998 | 0.995 |
| 546 | 0.998 | 0.996 |
| 500 | 0.998 | 0.994 |
| 460 | 0.997 | 0.993 |
| 436 | 0.997 | 0.992 |
| 420 | 0.997 | 0.993 |
| 405 | 0.997 | 0.993 |
| 400 | 0.997 | 0.992 |
| 390 | 0.996 | 0.989 |
| 380 | 0.993 | 0.983 |
| 370 | 0.991 | 0.977 |
| 365 | 0.988 | 0.971 |
| 350 | 0.967 | 0.920 |
| 334 | 0.905 | 0.780 |
| 320 | 0.770 | 0.520 |
| 310 | 0.574 | 0.250 |
| 300 | 0.292 | 0.050 |
| 290 | 0.063 | |
| 280 | | |
| 270 | | |
| 260 | | |
| 250 | | |

| Relative Partial Dispersion | |
|-----------------------------|--------|
| $P_{s,t}$ | 0.3098 |
| $P_{C,s}$ | 0.5612 |
| $P_{d,C}$ | 0.3076 |
| $P_{e,d}$ | 0.2386 |
| $P_{g,F}$ | 0.5349 |
| $P_{i,h}$ | 0.7483 |
| | |
| $P'_{s,t}$ | 0.3076 |
| $P'_{C',s}$ | 0.6062 |
| $P'_{d,C'}$ | 0.2566 |
| $P'_{e,d}$ | 0.2370 |
| $P'_{g,F'}$ | 0.4754 |
| $P'_{i,h}$ | 0.7432 |

Deviation of Relative Partial Dispersions ΔP from the "Normal Line"

| | |
|------------------|---------|
| $\Delta P_{C,t}$ | 0.0216 |
| $\Delta P_{C,s}$ | 0.0087 |
| $\Delta P_{F,e}$ | -0.0009 |
| $\Delta P_{g,F}$ | -0.0009 |
| $\Delta P_{i,g}$ | 0.0035 |

| Constants of Dispersion Formula | |
|---------------------------------|---------------|
| B_1 | 1.03961212 |
| B_2 | 0.231792344 |
| B_3 | 1.01046945 |
| C_1 | 0.00600069867 |
| C_2 | 0.0200179144 |
| C_3 | 103.560653 |

| Constants of Dispersion dn/dT | |
|---------------------------------|------------------------|
| D_0 | $1.86 \cdot 10^{-6}$ |
| D_1 | $1.31 \cdot 10^{-8}$ |
| D_2 | $-1.37 \cdot 10^{-11}$ |
| E_0 | $4.34 \cdot 10^{-7}$ |
| E_1 | $6.27 \cdot 10^{-10}$ |
| λ_{TK} [μm] | 0.17 |

| Color Code | |
|---------------------------------|-------|
| λ_{80}/λ_5 | 33/29 |
| (* = λ_{70}/λ_5) | |

| Remarks | |
|--------------------|--|
| step 0.5 available | |

| Other Properties | |
|---|-------|
| $\alpha_{-30/+70^\circ C}$ [$10^{-6}/K$] | 7.1 |
| $\alpha_{+20/+300^\circ C}$ [$10^{-6}/K$] | 8.3 |
| T_g [°C] | 557 |
| $T_{10}^{13.0}$ [°C] | 557 |
| $T_{10}^{7.6}$ [°C] | 719 |
| c_p [J/(g·K)] | 0.858 |
| λ [W/(m·K)] | 1.114 |
| | |
| ρ [g/cm ³] | 2.51 |
| E [10^3 N/mm ²] | 82 |
| μ | 0.206 |
| K [10^{-6} mm ² /N] | 2.77 |
| $HK_{0.1/20}$ | 610 |
| HG | 3 |
| | |
| | |
| | |
| CR | 1 |
| FR | 0 |
| SR | 1 |
| AR | 2.3 |
| PR | 2.3 |
| | |
| | |

| Temperature Coefficients of Refractive Index | | | | | | |
|--|---|-----|-----|---|-----|-----|
| [°C] | $\Delta n_{rel}/\Delta T$ [$10^{-6}/K$] | | | $\Delta n_{abs}/\Delta T$ [$10^{-6}/K$] | | |
| | 1060.0 | e | g | 1060.0 | e | g |
| -40/ -20 | 2.4 | 2.9 | 3.3 | 0.3 | 0.8 | 1.2 |
| +20/ +40 | 2.4 | 3.0 | 3.5 | 1.1 | 1.6 | 2.1 |
| +60/ +80 | 2.5 | 3.1 | 3.7 | 1.5 | 2.1 | 2.7 |