# Data Sheet

SCHOTT

## N-SSK8
## 618498.327

| | | |
|---|---|---|
| $n_d = 1.61773$ | $\nu_d = 49.83$ | $n_F - n_C = 0.012397$ |
| $n_e = 1.62068$ | $\nu_e = 49.54$ | $n_{F'} - n_{C'} = 0.012529$ |

### Refractive Indices

| | λ [nm] | |
|---|---|---|
| $n_{2325.4}$ | 2325.4 | 1.58594 |
| $n_{1970.1}$ | 1970.1 | 1.59137 |
| $n_{1529.6}$ | 1529.6 | 1.59723 |
| $n_{1060.0}$ | 1060.0 | 1.60360 |
| $n_t$ | 1014.0 | 1.60436 |
| $n_s$ | 852.1 | 1.60759 |
| $n_r$ | 706.5 | 1.61192 |
| $n_C$ | 656.3 | 1.61401 |
| $n_{C'}$ | 643.8 | 1.61460 |
| $n_{632.8}$ | 632.8 | 1.61515 |
| $n_D$ | 589.3 | 1.61762 |
| $n_d$ | 587.6 | 1.61773 |
| $n_e$ | 546.1 | 1.62068 |
| $n_F$ | 486.1 | 1.62641 |
| $n_{F'}$ | 480.0 | 1.62713 |
| $n_g$ | 435.8 | 1.63335 |
| $n_h$ | 404.7 | 1.63923 |
| $n_i$ | 365.0 | |
| $n_{334.1}$ | 334.1 | |
| $n_{312.6}$ | 312.6 | |
| $n_{296.7}$ | 296.7 | |
| $n_{280.4}$ | 280.4 | |
| $n_{248.3}$ | 248.3 | |

### Constants of Dispersion Formula

| | |
|---|---|
| $B_1$ | 1.44857867 |
| $B_2$ | 0.117965926 |
| $B_3$ | 1.06937528 |
| $C_1$ | 0.00869310149 |
| $C_2$ | 0.0421566593 |
| $C_3$ | 111.300666 |

### Constants of Dispersion dn/dT

| | |
|---|---|
| $D_0$ | $5.34 \cdot 10^{-7}$ |
| $D_1$ | $1.27 \cdot 10^{-8}$ |
| $D_2$ | $-1.75 \cdot 10^{-11}$ |
| $E_0$ | $5.40 \cdot 10^{-7}$ |
| $E_1$ | $7.05 \cdot 10^{-10}$ |
| $\lambda_{TK}$ [µm] | 0.224 |

### Internal Transmittance $\tau_i$

| λ [nm] | $\tau_i$ (10mm) | $\tau_i$ (25mm) |
|---|---|---|
| **2500** | 0.733 | 0.460 |
| **2325** | 0.847 | 0.660 |
| **1970** | 0.959 | 0.900 |
| **1530** | 0.992 | 0.980 |
| **1060** | 0.997 | 0.993 |
| **700** | 0.998 | 0.994 |
| **660** | 0.996 | 0.991 |
| **620** | 0.996 | 0.990 |
| **580** | 0.997 | 0.992 |
| **546** | 0.997 | 0.992 |
| **500** | 0.994 | 0.984 |
| **460** | 0.987 | 0.969 |
| **436** | 0.982 | 0.955 |
| **420** | 0.975 | 0.938 |
| **405** | 0.959 | 0.900 |
| **400** | 0.950 | 0.880 |
| **390** | 0.919 | 0.810 |
| **380** | 0.847 | 0.660 |
| **370** | 0.727 | 0.450 |
| **365** | 0.626 | 0.310 |
| **350** | 0.194 | 0.010 |
| **334** | | |
| **320** | | |
| **310** | | |
| **300** | | |
| **290** | | |
| **280** | | |
| **270** | | |
| **260** | | |
| **250** | | |
| | | |
| | | |

### Color Code

| | |
|---|---|
| $\lambda_{80}/\lambda_5$ | 39/35 |
| (*= $\lambda_{70}/\lambda_5$) | |

### Remarks

### Relative Partial Dispersion

| | |
|---|---|
| $P_{s,t}$ | 0.2606 |
| $P_{C,s}$ | 0.5179 |
| $P_{d,C}$ | 0.2999 |
| $P_{e,d}$ | 0.2378 |
| $P_{g,F}$ | 0.5602 |
| $P_{i,h}$ | |
| | |
| $P'_{s,t}$ | 0.2579 |
| $P'_{C',s}$ | 0.5594 |
| $P'_{d,C'}$ | 0.2498 |
| $P'_{e,d}$ | 0.2353 |
| $P'_{g,F'}$ | 0.4967 |
| $P'_{i,h}$ | |

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

| | |
|---|---|
| $\Delta P_{C,t}$ | -0.0028 |
| $\Delta P_{C,s}$ | -0.0012 |
| $\Delta P_{F,e}$ | 0.0001 |
| $\Delta P_{g,F}$ | 0.0002 |
| $\Delta P_{i,g}$ | |

### Other Properties

| | |
|---|---|
| $\alpha_{-30/+70°C}$ [$10^{-6}$/K] | 7.2 |
| $\alpha_{+20/+300°C}$ [$10^{-6}$/K] | 8.2 |
| $T_g$ [°C] | 616 |
| $T_{10}^{13.0}$ [°C] | 604 |
| $T_{10}^{7.6}$ [°C] | 742 |
| $c_p$ [J/(g·K)] | 0.640 |
| λ [W/(m·K)] | 0.840 |
| | |
| ρ [g/cm$^3$] | 3.27 |
| **E** [$10^3$ N/mm$^2$] | 84 |
| μ | 0.251 |
| **K** [$10^{-6}$ mm$^2$/N] | 2.36 |
| **HK**$_{0.1/20}$ | 570 |
| **HG** | 3 |
| | |
| | |
| | |
| **CR** | 1 |
| **FR** | 0 |
| **SR** | 1 |
| **AR** | 1.3 |
| **PR** | 1 |
| | |
| | |
| | |

### Temperature Coefficients of Refractive Index

| | $\Delta n_{rel}/\Delta T$ [$10^{-6}$/K] | | | $\Delta n_{abs}/\Delta T$ [$10^{-6}$/K] | | |
|---|---|---|---|---|---|---|
| **[°C]** | **1060.0** | **e** | **g** | **1060.0** | **e** | **g** |
| **-40/ -20** | 1.9 | 2.7 | 3.5 | -0.2 | 0.5 | 1.3 |
| **+20/ +40** | 2.0 | 2.9 | 3.9 | 0.6 | 1.5 | 2.4 |
| **+60/ +80** | 2.2 | 3.2 | 4.2 | 1.1 | 2.1 | 3.1 |