# Data Sheet

SCHOTT

## N-LASF43
## 806406.426

| | | |
|---|---|---|
| $n_d = 1.80610$ | $\nu_d = 40.61$ | $n_F - n_C = 0.019850$ |
| $n_e = 1.81081$ | $\nu_e = 40.36$ | $n_{F'} - n_{C'} = 0.020089$ |

### Refractive Indices

| | λ [nm] | |
|---|---|---|
| $n_{2325.4}$ | 2325.4 | 1.75901 |
| $n_{1970.1}$ | 1970.1 | 1.76662 |
| $n_{1529.6}$ | 1529.6 | 1.77488 |
| $n_{1060.0}$ | 1060.0 | 1.78413 |
| $n_t$ | 1014.0 | 1.78527 |
| $n_s$ | 852.1 | 1.79018 |
| $n_r$ | 706.5 | 1.79691 |
| $n_C$ | 656.3 | 1.80020 |
| $n_{C'}$ | 643.8 | 1.80113 |
| $n_{632.8}$ | 632.8 | 1.80200 |
| $n_D$ | 589.3 | 1.80593 |
| $n_d$ | 587.6 | 1.80610 |
| $n_e$ | 546.1 | 1.81081 |
| $n_F$ | 486.1 | 1.82005 |
| $n_{F'}$ | 480.0 | 1.82122 |
| $n_g$ | 435.8 | 1.83137 |
| $n_h$ | 404.7 | 1.84106 |
| $n_i$ | 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

| | |
|---|---|
| $B_1$ | 1.93502827 |
| $B_2$ | 0.23662935 |
| $B_3$ | 1.26291344 |
| $C_1$ | 0.0104001413 |
| $C_2$ | 0.0447505292 |
| $C_3$ | 87.437569 |

### Constants of Dispersion dn/dT

| | |
|---|---|
| $D_0$ | $4.77 \cdot 10^{-6}$ |
| $D_1$ | $1.14 \cdot 10^{-8}$ |
| $D_2$ | $-2.68 \cdot 10^{-12}$ |
| $E_0$ | $6.62 \cdot 10^{-7}$ |
| $E_1$ | $8.84 \cdot 10^{-10}$ |
| $\lambda_{TK}$ [µm] | 0.234 |

### Internal Transmittance $\tau_i$

| λ [nm] | $\tau_i$ (10mm) | $\tau_i$ (25mm) |
|---|---|---|
| **2500** | 0.398 | 0.100 |
| **2325** | 0.713 | 0.430 |
| **1970** | 0.937 | 0.850 |
| **1530** | 0.984 | 0.960 |
| **1060** | 0.998 | 0.994 |
| **700** | 0.998 | 0.995 |
| **660** | 0.998 | 0.995 |
| **620** | 0.997 | 0.993 |
| **580** | 0.996 | 0.991 |
| **546** | 0.995 | 0.988 |
| **500** | 0.990 | 0.975 |
| **460** | 0.980 | 0.950 |
| **436** | 0.967 | 0.920 |
| **420** | 0.954 | 0.890 |
| **405** | 0.933 | 0.840 |
| **400** | 0.919 | 0.810 |
| **390** | 0.882 | 0.730 |
| **380** | 0.821 | 0.610 |
| **370** | 0.707 | 0.420 |
| **365** | 0.618 | 0.300 |
| **350** | 0.221 | 0.020 |
| **334** | | |
| **320** | | |
| **310** | | |
| **300** | | |
| **290** | | |
| **280** | | |
| **270** | | |
| **260** | | |
| **250** | | |
| | | |
| | | |

### Color Code

| | |
|---|---|
| $\lambda_{80}/\lambda_5$ | 42/34 |
| (*= $\lambda_{70}/\lambda_5$) | |

### Remarks

### Relative Partial Dispersion

| | |
|---|---|
| $P_{s,t}$ | 0.2476 |
| $P_{C,s}$ | 0.5049 |
| $P_{d,C}$ | 0.2972 |
| $P_{e,d}$ | 0.2374 |
| $P_{g,F}$ | 0.5703 |
| $P_{i,h}$ | |
| | |
| $P'_{s,t}$ | 0.2446 |
| $P'_{C',s}$ | 0.5452 |
| $P'_{d,C'}$ | 0.2473 |
| $P'_{e,d}$ | 0.2346 |
| $P'_{g,F'}$ | 0.5053 |
| $P'_{i,h}$ | |

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

| | |
|---|---|
| $\Delta P_{C,t}$ | 0.0149 |
| $\Delta P_{C,s}$ | 0.0073 |
| $\Delta P_{F,e}$ | -0.0016 |
| $\Delta P_{g,F}$ | -0.0052 |
| $\Delta P_{i,g}$ | |

### Other Properties

| | |
|---|---|
| $\alpha_{-30/+70°C}$ [$10^{-6}$/K] | 5.5 |
| $\alpha_{+20/+300°C}$ [$10^{-6}$/K] | 6.7 |
| $T_g$ [°C] | 614 |
| $T_{10}^{13.0}$ [°C] | 615 |
| $T_{10}^{7.6}$ [°C] | 699 |
| $c_p$ [J/(g·K)] | 0.550 |
| λ [W/(m·K)] | 0.810 |
| | |
| ρ [g/cm$^3$] | 4.26 |
| **E** [$10^3$ N/mm$^2$] | 114 |
| μ | 0.290 |
| **K** [$10^{-6}$ mm$^2$/N] | 1.92 |
| **HK**$_{0.1/20}$ | 720 |
| **HG** | 2 |
| | |
| | |
| | |
| **CR** | 1 |
| **FR** | 1 |
| **SR** | 51.3 |
| **AR** | 1 |
| **PR** | 2 |
| | |
| | |
| | |

### 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** | 4.9 | 6.2 | 7.6 | 2.5 | 3.8 | 5.0 |
| **+20/ +40** | 5.0 | 6.5 | 8.1 | 3.4 | 4.9 | 6.4 |
| **+60/ +80** | 5.2 | 6.9 | 8.6 | 4.0 | 5.6 | 7.4 |