# Data Sheet

SCHOTT

## SF6G05
## 809253.520

| | | |
|---|---|---|
| $n_d = 1.80906$ | $\nu_d = 25.28$ | $n_F - n_C = 0.032015$ |
| $n_e = 1.81661$ | $\nu_e = 25.08$ | $n_{F'} - n_{C'} = 0.032570$ |

### Refractive Indices

| | λ [nm] | |
|---|---|---|
| $n_{2325.4}$ | 2325.4 | 1.75661 |
| $n_{1970.1}$ | 1970.1 | 1.76163 |
| $n_{1529.6}$ | 1529.6 | 1.76797 |
| $n_{1060.0}$ | 1060.0 | 1.77741 |
| $n_t$ | 1014.0 | 1.77879 |
| $n_s$ | 852.1 | 1.78524 |
| $n_r$ | 706.5 | 1.79491 |
| $n_C$ | 656.3 | 1.79988 |
| $n_{C'}$ | 643.8 | 1.80131 |
| $n_{632.8}$ | 632.8 | 1.80265 |
| $n_D$ | 589.3 | 1.80878 |
| $n_d$ | 587.6 | 1.80906 |
| $n_e$ | 546.1 | 1.81661 |
| $n_F$ | 486.1 | 1.83190 |
| $n_{F'}$ | 480.0 | 1.83387 |
| $n_g$ | 435.8 | |
| $n_h$ | 404.7 | |
| $n_i$ | 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

| | |
|---|---|
| $B_1$ | 1.62113942 |
| $B_2$ | 0.506586092 |
| $B_3$ | 10.4032298 |
| $C_1$ | 0.0113478992 |
| $C_2$ | 0.0535840223 |
| $C_3$ | 1118.83658 |

### Constants of Dispersion dn/dT

| | |
|---|---|
| $D_0$ | $6.90 \cdot 10^{-6}$ |
| $D_1$ | $1.76 \cdot 10^{-8}$ |
| $D_2$ | $-3.17 \cdot 10^{-11}$ |
| $E_0$ | $1.89 \cdot 10^{-6}$ |
| $E_1$ | $1.50 \cdot 10^{-9}$ |
| $\lambda_{TK}$ [µm] | 0.256 |

### Internal Transmittance $\tau_i$

| λ [nm] | $\tau_i$ (10mm) | $\tau_i$ (25mm) |
|---|---|---|
| **2500** | 0.847 | 0.660 |
| **2325** | 0.877 | 0.721 |
| **1970** | 0.965 | 0.915 |
| **1530** | 0.995 | 0.987 |
| **1060** | 0.998 | 0.994 |
| **700** | 0.985 | 0.962 |
| **660** | 0.980 | 0.950 |
| **620** | 0.972 | 0.931 |
| **580** | 0.958 | 0.898 |
| **546** | 0.917 | 0.805 |
| **500** | 0.642 | 0.330 |
| **460** | 0.090 | 0.080 |
| **436** | | |
| **420** | | |
| **405** | | |
| **400** | | |
| **390** | | |
| **380** | | |
| **370** | | |
| **365** | | |
| **350** | | |
| **334** | | |
| **320** | | |
| **310** | | |
| **300** | | |
| **290** | | |
| **280** | | |
| **270** | | |
| **260** | | |
| **250** | | |
| | | |
| | | |

### Color Code

| | |
|---|---|
| $\lambda_{80}/\lambda_5$ | 52/46* |
| (*= $\lambda_{70}/\lambda_5$) | |

### Remarks

radiation resistant glass

### Relative Partial Dispersion

| | |
|---|---|
| $P_{s,t}$ | 0.2013 |
| $P_{C,s}$ | 0.4574 |
| $P_{d,C}$ | 0.2866 |
| $P_{e,d}$ | 0.2358 |
| $P_{g,F}$ | |
| $P_{i,h}$ | |
| | |
| $P'_{s,t}$ | 0.1979 |
| $P'_{C',s}$ | 0.4933 |
| $P'_{d,C'}$ | 0.2380 |
| $P'_{e,d}$ | 0.2318 |
| $P'_{g,F'}$ | |
| $P'_{i,h}$ | |

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

| | |
|---|---|
| $\Delta P_{C,t}$ | -0.0062 |
| $\Delta P_{C,s}$ | -0.0044 |
| $\Delta P_{F,e}$ | 0.0025 |
| $\Delta P_{g,F}$ | |
| $\Delta P_{i,g}$ | |

### Other Properties

| | |
|---|---|
| $\alpha_{-30/+70°C}$ [$10^{-6}$/K] | 7.8 |
| $\alpha_{+20/+300°C}$ [$10^{-6}$/K] | |
| $T_g$ [°C] | 427 |
| $T_{10}^{13.0}$ [°C] | 0 |
| $T_{10}^{7.6}$ [°C] | 529 |
| $c_p$ [J/(g·K)] | |
| λ [W/(m·K)] | |
| | |
| ρ [g/cm³] | 5.20 |
| **E** [$10^3$ N/mm²] | |
| µ | |
| **K** [$10^{-6}$ mm²/N] | |
| $HK_{0.1/20}$ | 360 |
| **HG** | |
| | |
| | |
| | |
| **CR** | 4 |
| **FR** | 3 |
| **SR** | 51.3 |
| **AR** | 2.3 |
| **PR** | 3.3 |
| | |
| | |
| | |

### 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** | 6.4 | 10.3 | | 4.0 | 7.8 | |
| **+20/ +40** | 7.0 | 11.4 | | 5.5 | 9.8 | |
| **+60/ +80** | 7.5 | 12.1 | | 6.3 | 10.9 | |