# Data Sheet

SCHOTT

## BAFN6
## 589485.317

| | | |
|---|---|---|
| $n_d = 1.58900$ | $\nu_d = 48.45$ | $n_F - n_C = 0.012158$ |
| $n_e = 1.59189$ | $\nu_e = 48.16$ | $n_{F'} - n_{C'} = 0.012291$ |

### Refractive Indices

| | λ [nm] | |
|---|---|---|
| $n_{2325.4}$ | 2325.4 | 1.55832 |
| $n_{1970.1}$ | 1970.1 | 1.56349 |
| $n_{1529.6}$ | 1529.6 | 1.56910 |
| $n_{1060.0}$ | 1060.0 | 1.57522 |
| $n_t$ | 1014.0 | 1.57596 |
| $n_s$ | 852.1 | 1.57910 |
| $n_r$ | 706.5 | 1.58332 |
| $n_C$ | 656.3 | 1.58536 |
| $n_{C'}$ | 643.8 | 1.58594 |
| $n_{632.8}$ | 632.8 | 1.58647 |
| $n_D$ | 589.3 | 1.58889 |
| $n_d$ | 587.6 | 1.58900 |
| $n_e$ | 546.1 | 1.59189 |
| $n_F$ | 486.1 | 1.59752 |
| $n_{F'}$ | 480.0 | 1.59823 |
| $n_g$ | 435.8 | 1.60436 |
| $n_h$ | 404.7 | 1.61017 |
| $n_i$ | 365.0 | 1.62038 |
| $n_{334.1}$ | 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

| | |
|---|---|
| $B_1$ | 1.36719201 |
| $B_2$ | 0.10907994 |
| $B_3$ | 1.02108011 |
| $C_1$ | 0.00882820704 |
| $C_2$ | 0.0438731646 |
| $C_3$ | 113.58602 |

### Constants of Dispersion dn/dT

| | |
|---|---|
| $D_0$ | $1.34 \cdot 10^{-6}$ |
| $D_1$ | $1.34 \cdot 10^{-8}$ |
| $D_2$ | $-5.50 \cdot 10^{-11}$ |
| $E_0$ | $4.95 \cdot 10^{-7}$ |
| $E_1$ | $3.62 \cdot 10^{-10}$ |
| $\lambda_{TK}$ [µm] | 0.265 |

### Internal Transmittance $\tau_i$

| λ [nm] | $\tau_i$ (10mm) | $\tau_i$ (25mm) |
|---|---|---|
| **2500** | | |
| **2325** | 0.910 | 0.780 |
| **1970** | 0.976 | 0.940 |
| **1530** | 0.998 | 0.995 |
| **1060** | 0.998 | 0.995 |
| **700** | 0.999 | 0.997 |
| **660** | 0.998 | 0.995 |
| **620** | 0.998 | 0.994 |
| **580** | 0.998 | 0.994 |
| **546** | 0.996 | 0.991 |
| **500** | 0.994 | 0.986 |
| **460** | 0.990 | 0.975 |
| **436** | 0.985 | 0.963 |
| **420** | 0.981 | 0.954 |
| **405** | 0.976 | 0.940 |
| **400** | 0.971 | 0.930 |
| **390** | 0.954 | 0.890 |
| **380** | 0.920 | 0.810 |
| **370** | 0.850 | 0.670 |
| **365** | 0.790 | 0.560 |
| **350** | 0.430 | 0.120 |
| **334** | | |
| **320** | | |
| **310** | | |
| **300** | | |
| **290** | | |
| **280** | | |
| **270** | | |
| **260** | | |
| **250** | | |
| | | |
| | | |

### Color Code

| | |
|---|---|
| $\lambda_{80}/\lambda_5$ | 38/33 |
| (*= $\lambda_{70}/\lambda_5$) | |

### Remarks

inquiry glass, lead containing

### Relative Partial Dispersion

| | |
|---|---|
| $P_{s,t}$ | 0.2580 |
| $P_{C,s}$ | 0.5152 |
| $P_{d,C}$ | 0.2993 |
| $P_{e,d}$ | 0.2377 |
| $P_{g,F}$ | 0.5625 |
| $P_{i,h}$ | 0.8405 |
| | |
| $P'_{s,t}$ | 0.2552 |
| $P'_{C',s}$ | 0.5565 |
| $P'_{d,C'}$ | 0.2492 |
| $P'_{e,d}$ | 0.2351 |
| $P'_{g,F'}$ | 0.4987 |
| $P'_{i,h}$ | 0.8314 |

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

| | |
|---|---|
| $\Delta P_{C,t}$ | -0.0015 |
| $\Delta P_{C,s}$ | -0.0006 |
| $\Delta P_{F,e}$ | 0.0001 |
| $\Delta P_{g,F}$ | 0.0002 |
| $\Delta P_{i,g}$ | 0.0002 |

### Other Properties

| | |
|---|---|
| $\alpha_{-30/+70°C}$ [$10^{-6}$/K] | 7.8 |
| $\alpha_{+20/+300°C}$ [$10^{-6}$/K] | 8.5 |
| $T_g$ [°C] | 549 |
| $T_{10}^{13.0}$ [°C] | 0 |
| $T_{10}^{7.6}$ [°C] | 0 |
| $c_p$ [J/(g·K)] | |
| λ [W/(m·K)] | |
| | |
| ρ [g/cm$^3$] | 3.17 |
| **E** [$10^3$ N/mm$^2$] | 77 |
| μ | 0.234 |
| **K** [$10^{-6}$ mm$^2$/N] | 2.50 |
| $HK_{0.1/20}$ | 540 |
| **HG** | |
| | |
| | |
| | |
| **CR** | 2 |
| **FR** | 0 |
| **SR** | 2 |
| **AR** | 2 |
| **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** | 2.1 | 2.9 | 3.9 | 0.0 | 0.8 | 1.7 |
| **+20/ +40** | 2.3 | 3.2 | 4.3 | 1.0 | 1.8 | 2.8 |
| **+60/ +80** | 2.4 | 3.3 | 4.4 | 1.3 | 2.2 | 3.3 |