# Data Sheet

SCHOTT

## BG61

| Reflection factor | |
|---|---|
| $P_d$ | 0,914 |

| Reference thickness | |
|---|---|
| d [mm] | 1 |

| Spectral values guaranteed | | |
|---|---|---|
| τi (405 nm) | ≥ | 0,84 |
| τi (514 nm) | ≥ | 0,93 |
| τi (633 nm) | ≥ | 0,18 |
| τi (694 nm) | ≤ | 0,030 |
| τi (1060 nm) | ≤ | 0,008 |

| Refractive index n | | |
|---|---|---|
| λ [nm] | Element | n |
| 486,1 | H | 1,53 |
| 587,6 | He | 1,53 |

| Density | |
|---|---|
| ρ [g/cm$^3$] | 2,81 |

| Bubble content | |
|---|---|
| Bubble class | 2 |

| Chemical resistance | |
|---|---|
| FR class | 1 |
| SR class | 52.3 |
| AR class | 3.3 |

| Transformation temperature | |
|---|---|
| Tg [°C] | 402 |

| Thermal expansion | |
|---|---|
| $\alpha_{-30/+70°C}$ [$10^{-6}$/K] | 11,9 |
| $\alpha_{20/300°C}$ [$10^{-6}$/K] | 13,9 |
| $\alpha_{20/200°C}$ [$10^{-6}$/K] | |

| Temperature coefficient | |
|---|---|
| $T_k$ [nm/°C] | - |

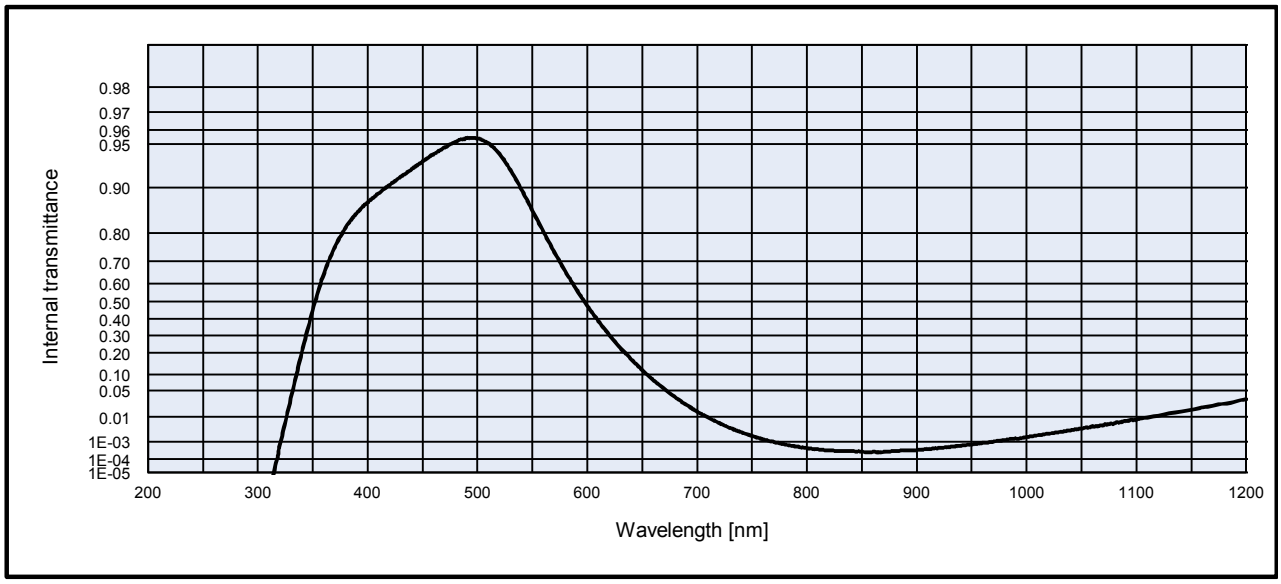
| Notes |
|---|
| |
| Ionically colored glass |
| |
| Band pass filter / short pass filter |
| Color compensating filter / IR cut filter |
| tau_50%(thickness=0.3mm) @ 644 nm |
| |
| Knoop hardness HK (0.1/20) = 365 |
| |
| [!] |
| Long-term changes in the polished |
| surface are possible under some |
| circumstances |
| |
| no visible surface damage after 500 h |
| of humidity test 85 °C / 85 % rh |
| |
| |
| |
| **All data without tolerances are to be** |
| **understood to be reference values.** |
| **Guaranteed values are only those** |
| **values listed in the section** |
| **-Spectral values guaranteed-.** |

**Colorimetric evaluation**

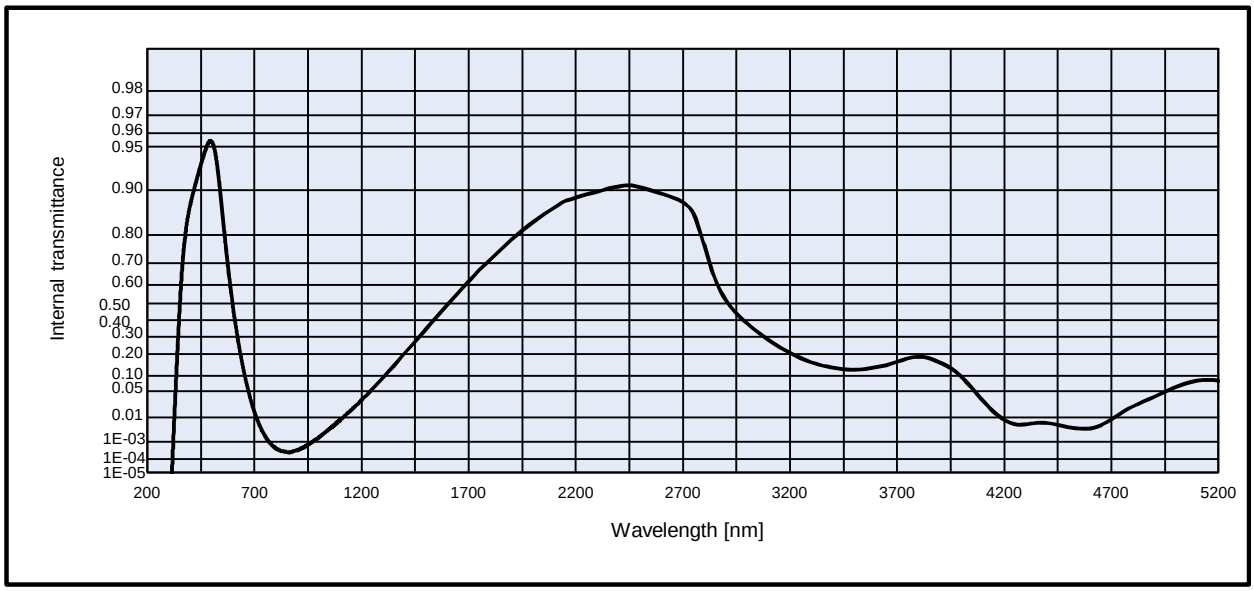
| Illuminant | A ( Planck T = 2856 K ) | | |
|---|---|---|---|
| d [mm] | 1 | 2 | 3 |
| x | | | |
| y | | | |
| Y | | | |
| $\lambda_d$ [nm] | | | |
| $P_e$ | | | |

| Illuminant | Planck T = 3200 K | | |
|---|---|---|---|
| d [mm] | 1 | 2 | 3 |
| x | | | |
| y | | | |
| Y | | | |
| $\lambda_d$ [nm] | | | |
| $P_e$ | | | |

| Illuminant | D65 ( $T_c$ = 6504 K ) | | |
|---|---|---|---|
| d [mm] | 1 | 2 | 3 |
| x | | | |
| y | | | |
| Y | | | |
| $\lambda_d$ [nm] | | | |
| $P_e$ | | | |



# BG61




**Internal transmittance τi at reference thickness d = 1 mm**
**The internal transmittance values, tabulated and graphically represented, are reference values only**

| λ [nm] | $\tau_i$ | λ [nm] | $\tau_i$ | λ [nm] | $\tau_i$ | λ [nm] | $\tau_i$ | λ [nm] | $\tau_i$ | λ [nm] | $\tau_i$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 200 | < 1,0E-05 | 500 | 9,5E-01 | 800 | 4,4E-04 | 1100 | 8,1E-03 | 2200 | 8,9E-01 | 3700 | 1,6E-01 |
| 210 | < 1,0E-05 | 510 | 9,5E-01 | 810 | 3,8E-04 | 1110 | 9,4E-03 | 2250 | 8,9E-01 | 3750 | 1,8E-01 |
| 220 | < 1,0E-05 | 520 | 9,4E-01 | 820 | 3,3E-04 | 1120 | 1,1E-02 | 2300 | 9,0E-01 | 3800 | 1,9E-01 |
| 230 | < 1,0E-05 | 530 | 9,2E-01 | 830 | 3,1E-04 | 1130 | 1,3E-02 | 2350 | 9,0E-01 | 3850 | 1,8E-01 |
| 240 | < 1,0E-05 | 540 | 9,0E-01 | 840 | 2,9E-04 | 1140 | 1,5E-02 | 2400 | 9,1E-01 | 3900 | 1,6E-01 |
| 250 | < 1,0E-05 | 550 | 8,6E-01 | 850 | 2,8E-04 | 1150 | 1,7E-02 | 2450 | 9,1E-01 | 3950 | 1,3E-01 |
| 260 | < 1,0E-05 | 560 | 8,0E-01 | 860 | 2,7E-04 | 1160 | 2,0E-02 | 2500 | 9,0E-01 | 4000 | 9,7E-02 |
| 270 | < 1,0E-05 | 570 | 7,4E-01 | 870 | 2,7E-04 | 1170 | 2,2E-02 | 2550 | 9,0E-01 | 4050 | 5,8E-02 |
| 280 | < 1,0E-05 | 580 | 6,6E-01 | 880 | 3,1E-04 | 1180 | 2,5E-02 | 2600 | 8,9E-01 | 4100 | 3,0E-02 |
| 290 | < 1,0E-05 | 590 | 5,7E-01 | 890 | 3,3E-04 | 1190 | 2,8E-02 | 2650 | 8,9E-01 | 4150 | 1,5E-02 |
| 300 | < 1,0E-05 | 600 | 4,8E-01 | 900 | 3,4E-04 | 1200 | 3,2E-02 | 2700 | 8,8E-01 | 4200 | 8,2E-03 |
| 310 | < 1,0E-05 | 610 | 3,9E-01 | 910 | 3,9E-04 | 1250 | 5,6E-02 | 2750 | 8,6E-01 | 4250 | 5,7E-03 |
| 320 | 6,5E-04 | 620 | 3,0E-01 | 920 | 4,6E-04 | 1300 | 9,3E-02 | 2800 | 7,7E-01 | 4300 | 5,7E-03 |
| 330 | 3,3E-02 | 630 | 2,3E-01 | 930 | 5,1E-04 | 1350 | 1,4E-01 | 2850 | 6,3E-01 | 4350 | 6,4E-03 |
| 340 | 2,0E-01 | 640 | 1,7E-01 | 940 | 5,8E-04 | 1400 | 2,0E-01 | 2900 | 5,2E-01 | 4400 | 6,3E-03 |
| 350 | 4,5E-01 | 650 | 1,2E-01 | 950 | 6,9E-04 | 1450 | 2,7E-01 | 2950 | 4,4E-01 | 4450 | 5,4E-03 |
| 360 | 6,4E-01 | 660 | 8,1E-02 | 960 | 8,5E-04 | 1500 | 3,4E-01 | 3000 | 3,8E-01 | 4500 | 4,4E-03 |
| 370 | 7,5E-01 | 670 | 5,5E-02 | 970 | 9,9E-04 | 1550 | 4,2E-01 | 3050 | 3,3E-01 | 4550 | 3,8E-03 |
| 380 | 8,2E-01 | 680 | 3,6E-02 | 980 | 1,2E-03 | 1600 | 4,9E-01 | 3100 | 2,8E-01 | 4600 | 3,9E-03 |
| 390 | 8,5E-01 | 690 | 2,3E-02 | 990 | 1,4E-03 | 1650 | 5,6E-01 | 3150 | 2,4E-01 | 4650 | 5,2E-03 |
| 400 | 8,7E-01 | 700 | 1,5E-02 | 1000 | 1,6E-03 | 1700 | 6,2E-01 | 3200 | 2,1E-01 | 4700 | 8,6E-03 |
| 410 | 8,9E-01 | 710 | 9,5E-03 | 1010 | 1,9E-03 | 1750 | 6,7E-01 | 3250 | 1,8E-01 | 4750 | 1,4E-02 |
| 420 | 9,0E-01 | 720 | 6,1E-03 | 1020 | 2,3E-03 | 1800 | 7,2E-01 | 3300 | 1,6E-01 | 4800 | 2,1E-02 |
| 430 | 9,2E-01 | 730 | 4,0E-03 | 1030 | 2,7E-03 | 1850 | 7,5E-01 | 3350 | 1,4E-01 | 4850 | 2,9E-02 |
| 440 | 9,3E-01 | 740 | 2,7E-03 | 1040 | 3,2E-03 | 1900 | 7,9E-01 | 3400 | 1,3E-01 | 4900 | 3,8E-02 |
| 450 | 9,3E-01 | 750 | 1,8E-03 | 1050 | 3,8E-03 | 1950 | 8,1E-01 | 3450 | 1,3E-01 | 4950 | 4,9E-02 |
| 460 | 9,4E-01 | 760 | 1,3E-03 | 1060 | 4,6E-03 | 2000 | 8,4E-01 | 3500 | 1,2E-01 | 5000 | 6,2E-02 |
| 470 | 9,5E-01 | 770 | 9,4E-04 | 1070 | 5,0E-03 | 2050 | 8,5E-01 | 3550 | 1,3E-01 | 5050 | 7,4E-02 |
| 480 | 9,5E-01 | 780 | 7,1E-04 | 1080 | 6,0E-03 | 2100 | 8,7E-01 | 3600 | 1,3E-01 | 5100 | 8,2E-02 |
| 490 | 9,5E-01 | 790 | 5,5E-04 | 1090 | 7,3E-03 | 2150 | 8,8E-01 | 3650 | 1,5E-01 | 5150 | 8,5E-02 |