


DATA SHEET

SCHOTT BG64

| Optical properties | |
|-----------------------------------|----------------------------|
| Reflection factor | |
| $P_d = 0,916$ | |
| Spectral values guaranteed | |
| τ_i (405 nm) | $\geq 0,99$ |
| τ_i (514 nm) | $\geq 0,99$ |
| τ_i (633 nm) | $\geq 0,72$ |
| τ_i (694 nm) | $\leq 0,55$ |
| τ_i (1060 nm) | $\leq 0,45$ |
| Refractive indices | |
| n_F (486 nm) | = 1,54 |
| n_e (546 nm) | = 1,53 |
| n_d (587,6 nm) | = 1,53 |
| Sellmeier coefficients | |
| valid from 365 nm to 2325 nm | |
| B_1 | 1,3031 |
| B_2 | 0,0067 |
| B_3 | 0,4940 |
| C_1 | 8,159E-03 μm^2 |
| C_2 | 5,5599E-02 μm^2 |
| C_3 | 69,869 μm^2 |
| Internal quality | |
| Bubble class | 2 |

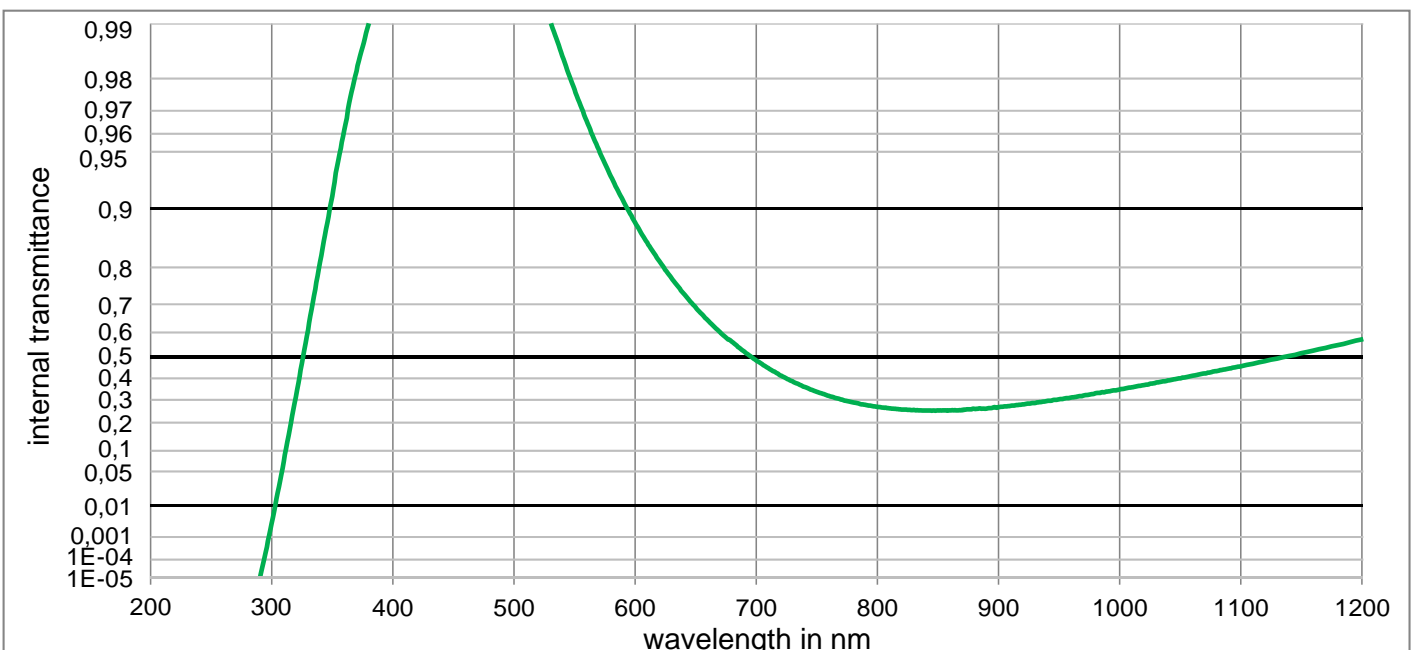
| Mechanical properties | |
|------------------------------|--|
| Reference thickness | |
| $d = 1,00 \text{ mm}$ | |
| Density | |
| $\rho = 2,78 \text{ g/cm}^3$ | |
| Knoop hardness | |
| $\text{HK}[0.1/20] = 371$ | |

| Thermal properties | |
|---|--------|
| Transformation temperature | |
| $T_g = 417 \text{ }^\circ\text{C}$ | |
| Thermal expansion in $10^{-6}/\text{K}$ | |
| α (-30 $^\circ\text{C}/+70^\circ\text{C}$) | = 12,0 |
| α (20 $^\circ\text{C}/300^\circ\text{C}$) | = 13,8 |

| Chemical properties | |
|--|--------|
| Chemical resistance | |
| FR class | = 1 |
| SR class | = 52.3 |
| AR class | = 3.3 |
|  Long-term changes in the polished surface are possible under some circumstances. | |

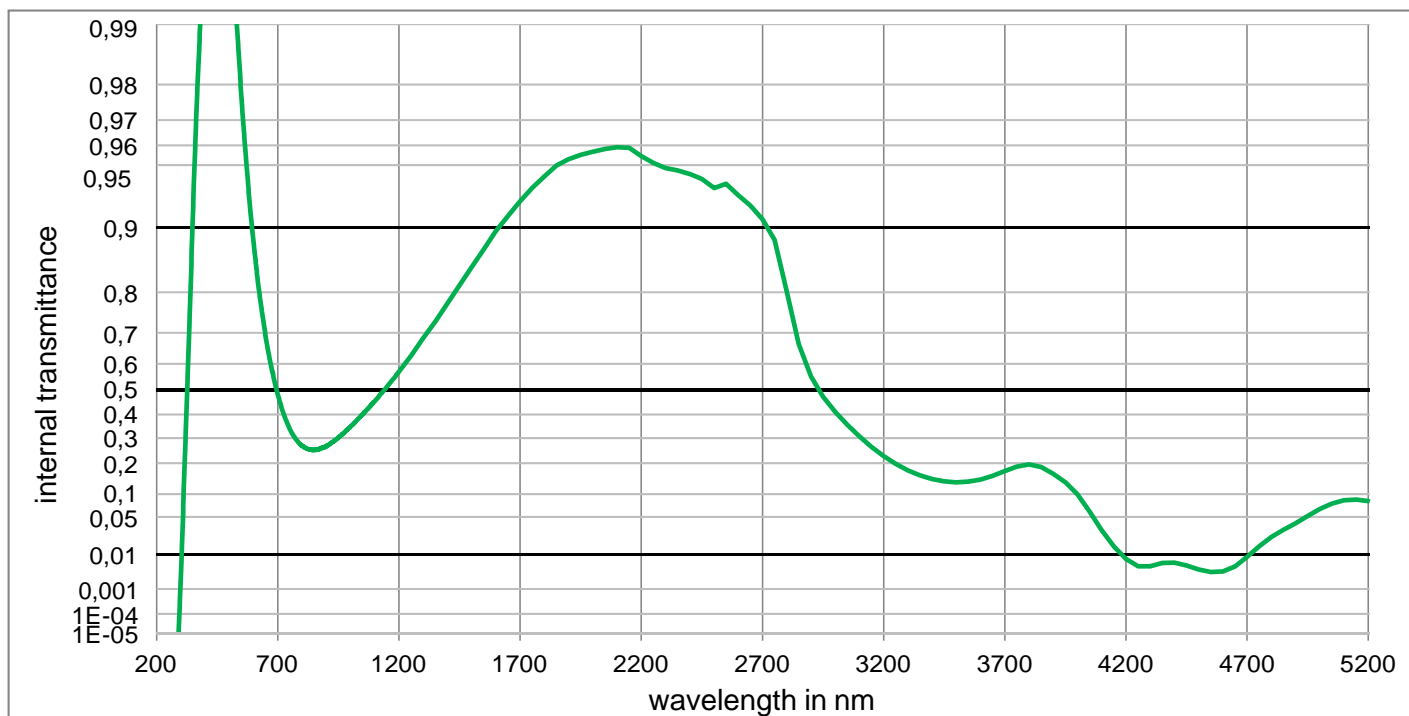
| Colorimetric properties | | | | |
|-------------------------|-------------|--------|--------|--------|
| | | 1 mm | 2 mm | 3 mm |
| Illuminant D65 | x | 0,297 | 0,284 | 0,272 |
| | y | 0,327 | 0,325 | 0,323 |
| | Y | 86,6 | 82,4 | 78,6 |
| | λ_d | 490 nm | 490 nm | 490 nm |
| | P_e | 0,058 | 0,109 | 0,154 |
| Illuminant A | x | 0,427 | 0,408 | 0,391 |
| | y | 0,414 | 0,419 | 0,423 |
| | Y | 84,4 | 78,4 | 73,3 |
| | λ_d | 500 nm | 500 nm | 500 nm |
| | P_e | 0,047 | 0,089 | 0,129 |

| Notes | |
|---|--|
| Ionically colored glass | |
| Bandpass filter / Shortpass filter | |
| NIR cutoff filter | |
| $\lambda_{50\%}(d=3\text{mm}) = 619 \text{ nm}$ | |
| DIN 58131 | |
| Disclaimer | |
| All data without tolerances are to be understood to be reference values | |



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Internal transmittance τ_i at reference thickness
The internal transmittance values, tabulated and graphically represented, are reference values only

| λ /nm | τ_i | λ /nm | τ_i | λ /nm | τ_i | λ /nm | τ_i | λ /nm | τ_i | | |
|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|------|-----------|
| 200 | < 1,0E-05 | 500 | 9,971E-01 | 800 | 2,682E-01 | 1100 | 4,553E-01 | 2200 | 9,549E-01 | 3700 | 1,706E-01 |
| 210 | < 1,0E-05 | 510 | 9,959E-01 | 810 | 2,611E-01 | 1110 | 4,666E-01 | 2250 | 9,512E-01 | 3750 | 1,874E-01 |
| 220 | < 1,0E-05 | 520 | 9,938E-01 | 820 | 2,558E-01 | 1120 | 4,786E-01 | 2300 | 9,484E-01 | 3800 | 1,951E-01 |
| 230 | < 1,0E-05 | 530 | 9,903E-01 | 830 | 2,539E-01 | 1130 | 4,896E-01 | 2350 | 9,469E-01 | 3850 | 1,849E-01 |
| 240 | < 1,0E-05 | 540 | 9,850E-01 | 840 | 2,511E-01 | 1140 | 5,017E-01 | 2400 | 9,447E-01 | 3900 | 1,614E-01 |
| 250 | < 1,0E-05 | 550 | 9,770E-01 | 850 | 2,523E-01 | 1150 | 5,137E-01 | 2450 | 9,416E-01 | 3950 | 1,338E-01 |
| 260 | < 1,0E-05 | 560 | 9,660E-01 | 860 | 2,522E-01 | 1160 | 5,248E-01 | 2500 | 9,354E-01 | 4000 | 9,910E-02 |
| 270 | < 1,0E-05 | 570 | 9,513E-01 | 870 | 2,539E-01 | 1170 | 5,370E-01 | 2550 | 9,383E-01 | 4050 | 5,906E-02 |
| 280 | < 1,0E-05 | 580 | 9,324E-01 | 880 | 2,592E-01 | 1180 | 5,479E-01 | 2600 | 9,299E-01 | 4100 | 3,025E-02 |
| 290 | < 1,0E-05 | 590 | 9,093E-01 | 890 | 2,601E-01 | 1190 | 5,602E-01 | 2650 | 9,214E-01 | 4150 | 1,459E-02 |
| 300 | 3,0E-03 | 600 | 8,816E-01 | 900 | 2,661E-01 | 1200 | 5,719E-01 | 2700 | 9,084E-01 | 4200 | 7,556E-03 |
| 310 | 7,2E-02 | 610 | 8,496E-01 | 910 | 2,722E-01 | 1250 | 6,292E-01 | 2750 | 8,853E-01 | 4250 | 4,980E-03 |
| 320 | 3,138E-01 | 620 | 8,137E-01 | 920 | 2,787E-01 | 1300 | 6,842E-01 | 2800 | 8,020E-01 | 4300 | 4,985E-03 |
| 330 | 6,101E-01 | 630 | 7,745E-01 | 930 | 2,850E-01 | 1350 | 7,313E-01 | 2850 | 6,664E-01 | 4350 | 6,061E-03 |
| 340 | 8,116E-01 | 640 | 7,328E-01 | 940 | 2,938E-01 | 1400 | 7,753E-01 | 2900 | 5,540E-01 | 4400 | 6,099E-03 |
| 350 | 9,134E-01 | 650 | 6,894E-01 | 950 | 3,014E-01 | 1450 | 8,142E-01 | 2950 | 4,734E-01 | 4450 | 5,149E-03 |
| 360 | 9,618E-01 | 660 | 6,452E-01 | 960 | 3,100E-01 | 1500 | 8,461E-01 | 3000 | 4,106E-01 | 4500 | 4,072E-03 |
| 370 | 9,818E-01 | 670 | 6,013E-01 | 970 | 3,187E-01 | 1550 | 8,733E-01 | 3050 | 3,560E-01 | 4550 | 3,468E-03 |
| 380 | 9,899E-01 | 680 | 5,625E-01 | 980 | 3,291E-01 | 1600 | 8,959E-01 | 3100 | 3,067E-01 | 4600 | 3,580E-03 |
| 390 | 9,935E-01 | 690 | 5,212E-01 | 990 | 3,379E-01 | 1650 | 9,119E-01 | 3150 | 2,634E-01 | 4650 | 4,884E-03 |
| 400 | 9,950E-01 | 700 | 4,821E-01 | 1000 | 3,475E-01 | 1700 | 9,252E-01 | 3200 | 2,268E-01 | 4700 | 8,466E-03 |
| 410 | 9,959E-01 | 710 | 4,471E-01 | 1010 | 3,575E-01 | 1750 | 9,356E-01 | 3250 | 1,972E-01 | 4750 | 1,487E-02 |
| 420 | 9,962E-01 | 720 | 4,140E-01 | 1020 | 3,681E-01 | 1800 | 9,432E-01 | 3300 | 1,740E-01 | 4800 | 2,278E-02 |
| 430 | 9,966E-01 | 730 | 3,852E-01 | 1030 | 3,793E-01 | 1850 | 9,497E-01 | 3350 | 1,565E-01 | 4850 | 3,076E-02 |
| 440 | 9,970E-01 | 740 | 3,593E-01 | 1040 | 3,898E-01 | 1900 | 9,532E-01 | 3400 | 1,440E-01 | 4900 | 3,956E-02 |
| 450 | 9,973E-01 | 750 | 3,369E-01 | 1050 | 3,999E-01 | 1950 | 9,556E-01 | 3450 | 1,367E-01 | 4950 | 5,139E-02 |
| 460 | 9,976E-01 | 760 | 3,175E-01 | 1060 | 4,107E-01 | 2000 | 9,570E-01 | 3500 | 1,339E-01 | 5000 | 6,452E-02 |
| 470 | 9,977E-01 | 770 | 3,011E-01 | 1070 | 4,223E-01 | 2050 | 9,583E-01 | 3550 | 1,362E-01 | 5050 | 7,625E-02 |
| 480 | 9,977E-01 | 780 | 2,879E-01 | 1080 | 4,326E-01 | 2100 | 9,591E-01 | 3600 | 1,428E-01 | 5100 | 8,386E-02 |
| 490 | 9,977E-01 | 790 | 2,763E-01 | 1090 | 4,452E-01 | 2150 | 9,589E-01 | 3650 | 1,544E-01 | 5150 | 8,586E-02 |

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UQG (Optics) Ltd. The Norman Industrial Estate, 99-101 Cambridge Road, Milton, Cambridge CB24 6AT. England.
Tel | +00 44 (0) 1223 420329 Fax | +00 44 (0) 1223 420506 Email | info@uqgoptics.com

www.uqgoptics.com

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