Data Sheet

SCHOTT

BG40

Reflection factor	
P_d	0.92

Reference thickness	
d [mm]	1

Spectral values guaranteed		
τi (350 nm)	≥	0.80
τi (405 nm)	≥	0.93
τi (514 nm)	≥	0.97
τi (633 nm)	≤	0.57
τi (694 nm)	≤	0.16
τi (1060 nm)	≤	0.02

Refractive index n		
λ [nm]	Element	n
404.7	Hg	1.54
587.6	He	1.53

Density	
ρ [g/cm^3]	2.74

Bubble content	
Bubble class	2

Chemical resistance	
FR class	0
SR class	5.1
AR class	3.0

Transformation temperature	
Tg [°C]	313

Thermal expansion	
$\alpha_{-30/+70°C}$ [10^{-6}/K]	11.9
$\alpha_{20/300°C}$ [10^{-6}/K]	
$\alpha_{20/200°C}$ [10^{-6}/K]	13.7

Temperature coefficient	
T_K [nm/°C]	

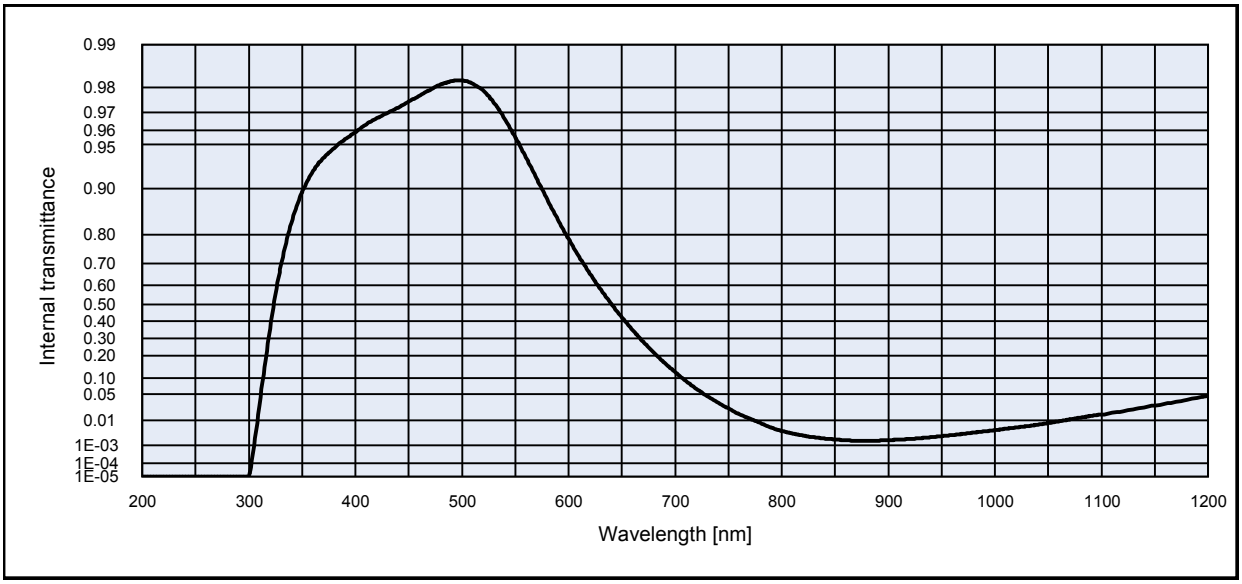
Notes
Ionically colored glass
Band pass filter / short pass filter
[!]
Long-term changes in the polished
surface are possible under some
circumstances
All data without tolerances are to be understood to be reference values. Guaranteed values are only those values listed in the section "Spectral values guaranteed".

Colorimetric evaluation

Illuminant	A (Planck T = 2856 K)		
d [mm]	1	2	3
x	0.406	0.374	0.348
y	0.421	0.430	0.436
Y	78	68	61
λ_d [nm]	501	500	500
P_e	0.09	0.17	0.23

Illuminant	Planck T = 3200 K		
d [mm]	1	2	3
x	0.383	0.352	0.327
y	0.409	0.415	0.419
Y	79	70	63
λ_d [nm]	499	498	498
P_e	0.10	0.17	0.23

Illuminant	D65 (T_c = 6504 K)		
d [mm]	1	2	3
x	0.283	0.262	0.246
y	0.327	0.324	0.321
Y	82	75	69
λ_d [nm]	491	490	490
P_e	0.11	0.19	0.25



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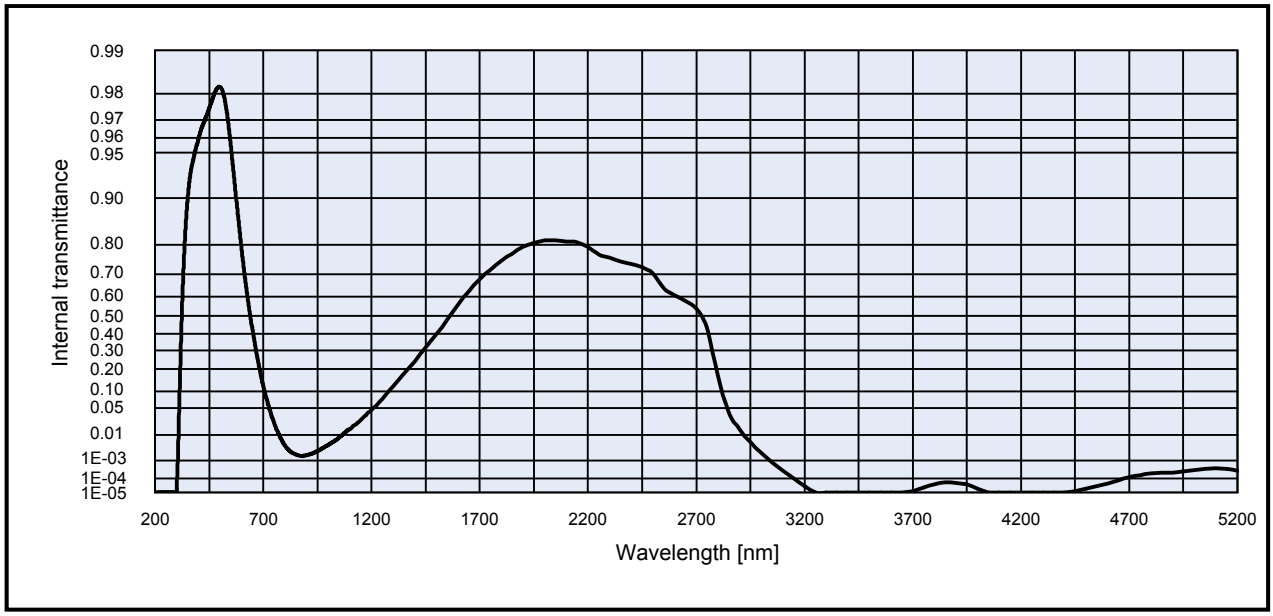

Internal transmittance τ_i at reference thickness d [mm] = 1
The internal transmittance values, tabulated and graphically represented, are reference values only

λ [nm]	τ_i	λ [nm]	τ_i	λ [nm]	τ_i	λ [nm]	τ_i	λ [nm]	τ_i	λ [nm]	τ_i
200	< 1.0E-05	500	9.8E-01	800	4.3E-03	1100	1.5E-02	2200	7.9E-01	3700	1.2E-05
210	< 1.0E-05	510	9.8E-01	810	3.4E-03	1110	1.7E-02	2250	7.7E-01	3750	2.5E-05
220	< 1.0E-05	520	9.8E-01	820	2.8E-03	1120	1.9E-02	2300	7.6E-01	3800	4.2E-05
230	< 1.0E-05	530	9.7E-01	830	2.3E-03	1130	2.1E-02	2350	7.5E-01	3850	5.4E-05
240	< 1.0E-05	540	9.7E-01	840	2.1E-03	1140	2.4E-02	2400	7.4E-01	3900	5.3E-05
250	< 1.0E-05	550	9.6E-01	850	1.9E-03	1150	2.7E-02	2450	7.3E-01	3950	4.3E-05
260	< 1.0E-05	560	9.4E-01	860	1.7E-03	1160	3.1E-02	2500	7.0E-01	4000	2.0E-05
270	< 1.0E-05	570	9.2E-01	870	1.6E-03	1170	3.3E-02	2550	6.4E-01	4050	< 1.0E-05
280	< 1.0E-05	580	8.8E-01	880	1.6E-03	1180	3.7E-02	2600	6.1E-01	4100	< 1.0E-05
290	< 1.0E-05	590	8.4E-01	890	1.7E-03	1190	4.1E-02	2650	5.8E-01	4150	< 1.0E-05
300	< 1.0E-05	600	7.9E-01	900	1.8E-03	1200	4.6E-02	2700	5.4E-01	4200	< 1.0E-05
310	2.6E-02	610	7.3E-01	910	1.8E-03	1250	7.5E-02	2750	4.4E-01	4250	< 1.0E-05
320	3.6E-01	620	6.6E-01	920	2.0E-03	1300	1.2E-01	2800	1.7E-01	4300	< 1.0E-05
330	6.9E-01	630	5.8E-01	930	2.1E-03	1350	1.8E-01	2850	4.2E-02	4350	< 1.0E-05
340	8.3E-01	640	5.0E-01	940	2.4E-03	1400	2.4E-01	2900	1.5E-02	4400	< 1.0E-05
350	8.9E-01	650	4.2E-01	950	2.6E-03	1450	3.2E-01	2950	5.8E-03	4450	1.3E-05
360	9.2E-01	660	3.5E-01	960	2.9E-03	1500	4.0E-01	3000	2.2E-03	4500	2.0E-05
370	9.4E-01	670	2.8E-01	970	3.2E-03	1550	4.8E-01	3050	8.1E-04	4550	3.0E-05
380	9.5E-01	680	2.2E-01	980	3.6E-03	1600	5.6E-01	3100	2.8E-04	4600	4.6E-05
390	9.5E-01	690	1.7E-01	990	4.1E-03	1650	6.3E-01	3150	9.8E-05	4650	7.4E-05
400	9.6E-01	700	1.2E-01	1000	4.5E-03	1700	6.8E-01	3200	3.0E-05	4700	1.2E-04
410	9.6E-01	710	8.9E-02	1010	5.1E-03	1750	7.2E-01	3250	1.0E-05	4750	1.6E-04
420	9.7E-01	720	6.4E-02	1020	5.7E-03	1800	7.5E-01	3300	< 1.0E-05	4800	2.0E-04
430	9.7E-01	730	4.6E-02	1030	6.4E-03	1850	7.7E-01	3350	< 1.0E-05	4850	2.3E-04
440	9.7E-01	740	3.2E-02	1040	7.1E-03	1900	7.9E-01	3400	< 1.0E-05	4900	2.3E-04
450	9.7E-01	750	2.3E-02	1050	8.2E-03	1950	8.0E-01	3450	< 1.0E-05	4950	2.6E-04
460	9.8E-01	760	1.6E-02	1060	9.4E-03	2000	8.1E-01	3500	< 1.0E-05	5000	3.1E-04
470	9.8E-01	770	1.1E-02	1070	1.1E-02	2050	8.1E-01	3550	< 1.0E-05	5050	3.8E-04
480	9.8E-01	780	8.3E-03	1080	1.2E-02	2100	8.1E-01	3600	< 1.0E-05	5100	4.0E-04
490	9.8E-01	790	5.7E-03	1090	1.4E-02	2150	8.1E-01	3650	< 1.0E-05	5150	3.8E-04