Data Sheet

SCHOTT

BG18

Reflection factor	
P_d	0.914

Reference thickness	
d [mm]	1

Spectral values guaranteed		
τ_i (350nm)	≥	0.3
τ_i (405nm)	≥	0.65
τ_i (514nm)	≥	0.88
τ_i (633nm)	≤	0.25
τ_i (694nm)	≤	0.03
τ_i (1060nm)	≤	0.0005

Refractive Index n
n_h (404.7 nm) = 1.550
n_d (587.6 nm) = 1.540

Density	
ρ [g/cm^3]	2.68

Bubble content	
Bubble class	2

Chemical Resistance	
FR class	0
SR class	2.0
AR class	2.0

Transformation temperature	
Tg [°C]	457

Thermal expansion	
$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.4
$\alpha_{20/300°C}$ [10^{-6}/K]	8.9
$\alpha_{20/200°C}$ [10^{-6}/K]	

Temperature coefficient	
T_K [nm/°C]	

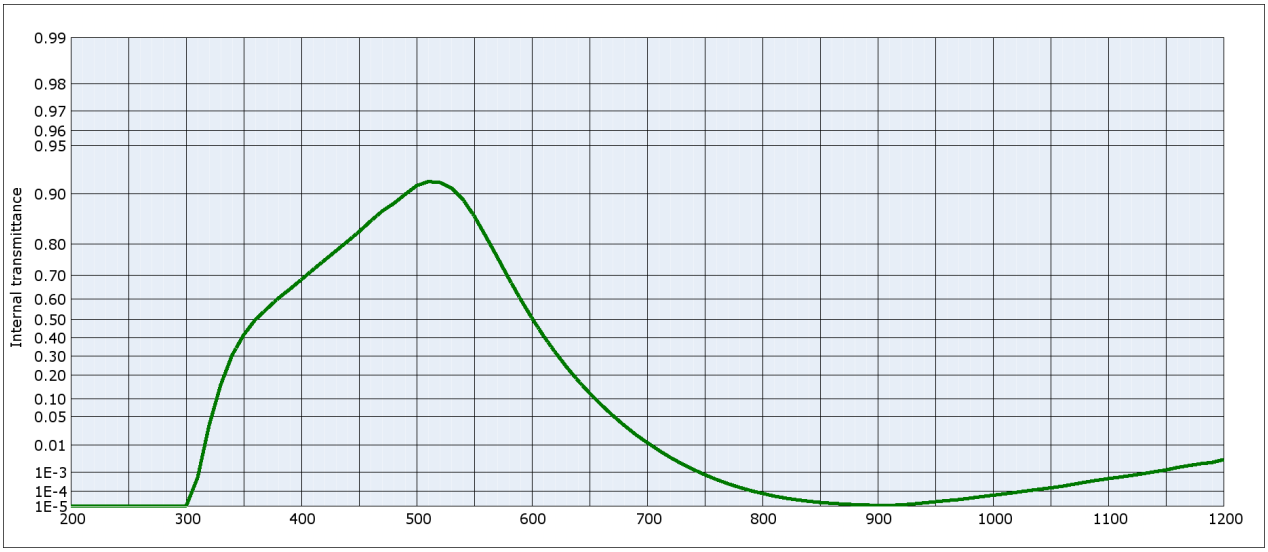
Notes
Ionically colored glass
Bandpass filter / shortpass filter
All data wihout tolerances are to be understood to be reference values. Guaranteed values are only those values listed in the section "Spectral values guaranteed".

Colorimetric evaluation

Illuminant	A (Planck T = 2856 K)		
d [mm]	1	2	3
x	0.361	0.309	0.275
y	0.441	0.459	0.472
Y	61	46	37
λ_d [nm]	502	501	501
P_e	0.20	0.31	0.39

Illuminant	Planck T = 3200 K		
d [mm]	1	2	3
x	0.340	0.292	0.260
y	0.426	0.441	0.451
Y	62	48	38
λ_d [nm]	500	500	500
P_e	0.20	0.32	0.39

Illuminant	D65 (T_C = 6504 K)		
d [mm]	1	2	3
x	0.255	0.225	0.206
y	0.335	0.340	0.346
Y	68	54	45
λ_d [nm]	493	493	493
P_e	0.21	0.31	0.38



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Further explanations see 'Optical Filters 2013' catalogue

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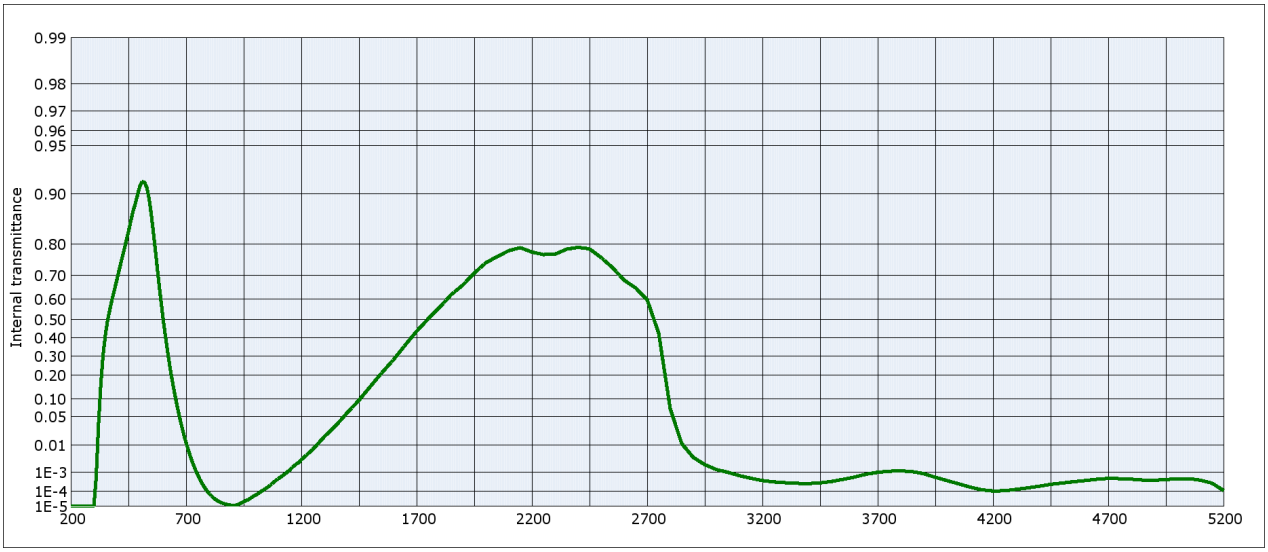

Internal transmittance τ_i at reference thickness d = 1 mm
The internal transmittance values, tabulated and graphically represented, are reference values only

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	$< 10^{-5}$	500	0.911	800	$7.6 \cdot 10^{-5}$	1100	$5.0 \cdot 10^{-4}$	2200	0.777	3700	$1.0 \cdot 10^{-3}$
210	$< 10^{-5}$	510	0.916	810	$5.2 \cdot 10^{-5}$	1110	$6.0 \cdot 10^{-4}$	2250	0.769	3750	$1.1 \cdot 10^{-3}$
220	$< 10^{-5}$	520	0.915	820	$3.8 \cdot 10^{-5}$	1120	$7.1 \cdot 10^{-4}$	2300	0.770	3800	$1.2 \cdot 10^{-3}$
230	$< 10^{-5}$	530	0.908	830	$2.9 \cdot 10^{-5}$	1130	$8.6 \cdot 10^{-4}$	2350	0.785	3850	$1.1 \cdot 10^{-3}$
240	$< 10^{-5}$	540	0.892	840	$2.3 \cdot 10^{-5}$	1140	$1.1 \cdot 10^{-3}$	2400	0.790	3900	$8.6 \cdot 10^{-4}$
250	$< 10^{-5}$	550	0.863	850	$1.9 \cdot 10^{-5}$	1150	$1.3 \cdot 10^{-3}$	2450	0.786	3950	$5.8 \cdot 10^{-4}$
260	$< 10^{-5}$	560	0.819	860	$1.7 \cdot 10^{-5}$	1160	$1.6 \cdot 10^{-3}$	2500	0.760	4000	$4.0 \cdot 10^{-4}$
270	$< 10^{-5}$	570	0.761	870	$1.5 \cdot 10^{-5}$	1170	$1.9 \cdot 10^{-3}$	2550	0.726	4050	$2.7 \cdot 10^{-4}$
280	$< 10^{-5}$	580	0.686	880	$1.3 \cdot 10^{-5}$	1180	$2.3 \cdot 10^{-3}$	2600	0.680	4100	$1.8 \cdot 10^{-4}$
290	$< 10^{-5}$	590	0.600	890	$1.2 \cdot 10^{-5}$	1190	$2.6 \cdot 10^{-3}$	2650	0.648	4150	$1.3 \cdot 10^{-4}$
300	$< 10^{-5}$	600	0.506	900	$1.2 \cdot 10^{-5}$	1200	$3.3 \cdot 10^{-3}$	2700	0.596	4200	$1.1 \cdot 10^{-4}$
310	$5.6 \cdot 10^{-4}$	610	0.411	910	$1.2 \cdot 10^{-5}$	1250	$7.5 \cdot 10^{-3}$	2750	0.426	4250	$1.1 \cdot 10^{-4}$
320	$3.3 \cdot 10^{-2}$	620	0.322	920	$1.3 \cdot 10^{-5}$	1300	$1.8 \cdot 10^{-2}$	2800	$7.0 \cdot 10^{-2}$	4300	$1.3 \cdot 10^{-4}$
330	0.156	630	0.242	930	$1.5 \cdot 10^{-5}$	1350	$3.3 \cdot 10^{-2}$	2850	$1.1 \cdot 10^{-2}$	4350	$1.6 \cdot 10^{-4}$
340	0.305	640	0.175	940	$1.8 \cdot 10^{-5}$	1400	$6.0 \cdot 10^{-2}$	2900	$4.0 \cdot 10^{-3}$	4400	$2.0 \cdot 10^{-4}$
350	0.416	650	0.122	950	$2.1 \cdot 10^{-5}$	1450	$9.6 \cdot 10^{-2}$	2950	$2.1 \cdot 10^{-3}$	4450	$2.6 \cdot 10^{-4}$
360	0.497	660	$8.2 \cdot 10^{-2}$	960	$2.6 \cdot 10^{-5}$	1500	0.150	3000	$1.3 \cdot 10^{-3}$	4500	$3.0 \cdot 10^{-4}$
370	0.552	670	$5.3 \cdot 10^{-2}$	970	$3.0 \cdot 10^{-5}$	1550	0.214	3050	$1.0 \cdot 10^{-3}$	4550	$3.5 \cdot 10^{-4}$
380	0.603	680	$3.3 \cdot 10^{-2}$	980	$3.7 \cdot 10^{-5}$	1600	0.280	3100	$7.0 \cdot 10^{-4}$	4600	$4.0 \cdot 10^{-4}$
390	0.643	690	$2.0 \cdot 10^{-2}$	990	$4.8 \cdot 10^{-5}$	1650	0.359	3150	$5.2 \cdot 10^{-4}$	4650	$4.7 \cdot 10^{-4}$
400	0.682	700	$1.2 \cdot 10^{-2}$	1000	$5.8 \cdot 10^{-5}$	1700	0.436	3200	$4.0 \cdot 10^{-4}$	4700	$5.1 \cdot 10^{-4}$
410	0.719	710	$7.0 \cdot 10^{-3}$	1010	$7.1 \cdot 10^{-5}$	1750	0.502	3250	$3.4 \cdot 10^{-4}$	4750	$5.0 \cdot 10^{-4}$
420	0.751	720	$4.0 \cdot 10^{-3}$	1020	$8.8 \cdot 10^{-5}$	1800	0.560	3300	$3.1 \cdot 10^{-4}$	4800	$4.7 \cdot 10^{-4}$
430	0.780	730	$2.3 \cdot 10^{-3}$	1030	$1.1 \cdot 10^{-4}$	1850	0.619	3350	$2.9 \cdot 10^{-4}$	4850	$4.3 \cdot 10^{-4}$
440	0.806	740	$1.3 \cdot 10^{-3}$	1040	$1.3 \cdot 10^{-4}$	1900	0.660	3400	$2.8 \cdot 10^{-4}$	4900	$4.2 \cdot 10^{-4}$
450	0.830	750	$7.7 \cdot 10^{-4}$	1050	$1.6 \cdot 10^{-4}$	1950	0.707	3450	$3.0 \cdot 10^{-4}$	4950	$4.5 \cdot 10^{-4}$
460	0.853	760	$4.6 \cdot 10^{-4}$	1060	$2.0 \cdot 10^{-4}$	2000	0.743	3500	$3.6 \cdot 10^{-4}$	5000	$5.0 \cdot 10^{-4}$
470	0.872	770	$2.8 \cdot 10^{-4}$	1070	$2.6 \cdot 10^{-4}$	2050	0.763	3550	$4.6 \cdot 10^{-4}$	5050	$5.0 \cdot 10^{-4}$
480	0.885	780	$1.7 \cdot 10^{-4}$	1080	$3.3 \cdot 10^{-4}$	2100	0.781	3600	$6.0 \cdot 10^{-4}$	5100	$4.2 \cdot 10^{-4}$
490	0.899	790	$1.1 \cdot 10^{-4}$	1090	$4.1 \cdot 10^{-4}$	2150	0.789	3650	$8.2 \cdot 10^{-4}$	5150	$2.9 \cdot 10^{-4}$

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