DATA SHEET

SCHOTT BG38

BG38

Reflection factor	
P_d	0.916

Reference thickness	
d [mm]	1

Spectral values guaranteed		
τ_i (350nm)	≥	0.8
τ_i (405nm)	≥	0.93
τ_i (514nm)	≥	0.95
τ_i (633nm)	≤	0.67
τ_i (694nm)	≤	0.32
τ_i (1060nm)	≤	0.06

Refractive Index n
n_h (404.7 nm) = 1.540
n_d (587.6 nm) = 1.530

Density	
ρ [g/cm^3]	2.66

Bubble content	
Bubble class	2

Chemical Resistance	
FR class	0
SR class	2.0
AR class	2.0

Transformation temperature	
Tg [°C]	482

Thermal expansion	
$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.5
$\alpha_{20/300°C}$ [10^{-6}/K]	8.9
$\alpha_{20/200°C}$ [10^{-6}/K]	

Temperature coefficient	
T_K [nm/°C]	

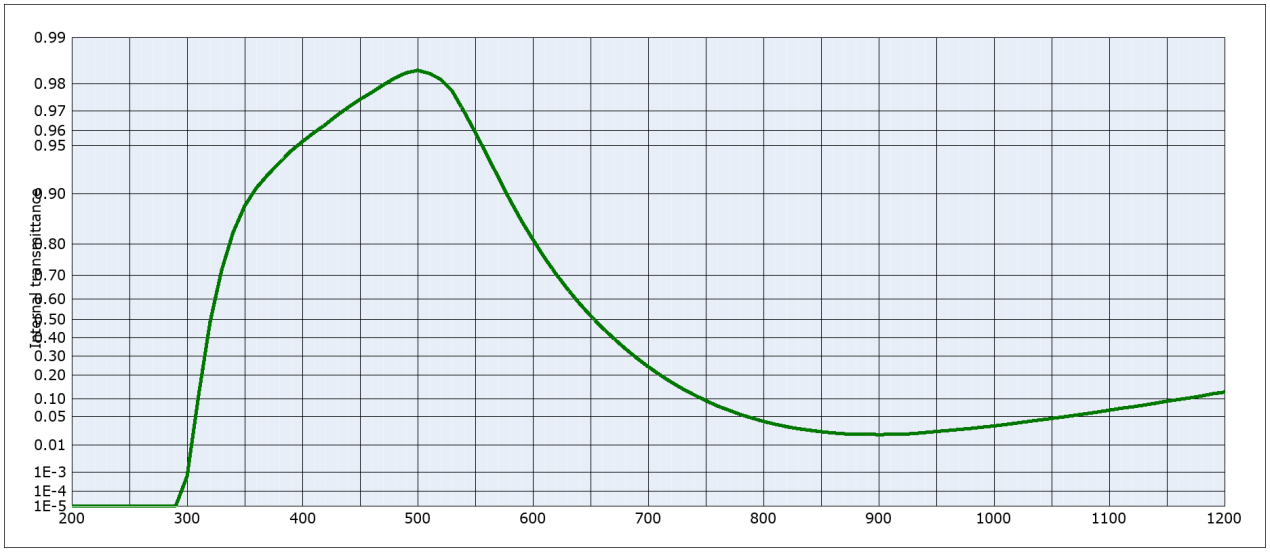
Notes
Ionically colored glass
Bandpass filter / shortpass filter
All data wihout tolerances are to be
understood to be reference values.
Guaranteed values are only those
values listed in the section
"Spectral values guaranteed".

Colorimetric evaluation

Illuminant	A (Planck T = 2856 K)		
d [mm]	1	2	3
x	0.413	0.384	0.360
y	0.419	0.427	0.433
Y	80	71	64
λ_d [nm]	501	500	500
P_e	0.08	0.14	0.20

Illuminant	Planck T = 3200 K		
d [mm]	1	2	3
x	0.390	0.362	0.339
y	0.407	0.413	0.417
Y	80	72	65
λ_d [nm]	499	498	498
P_e	0.08	0.15	0.21

Illuminant	D65 (T_C = 6504 K)		
d [mm]	1	2	3
x	0.288	0.268	0.253
y	0.328	0.326	0.323
Y	83	76	71
λ_d [nm]	491	491	490
P_e	0.09	0.16	0.22



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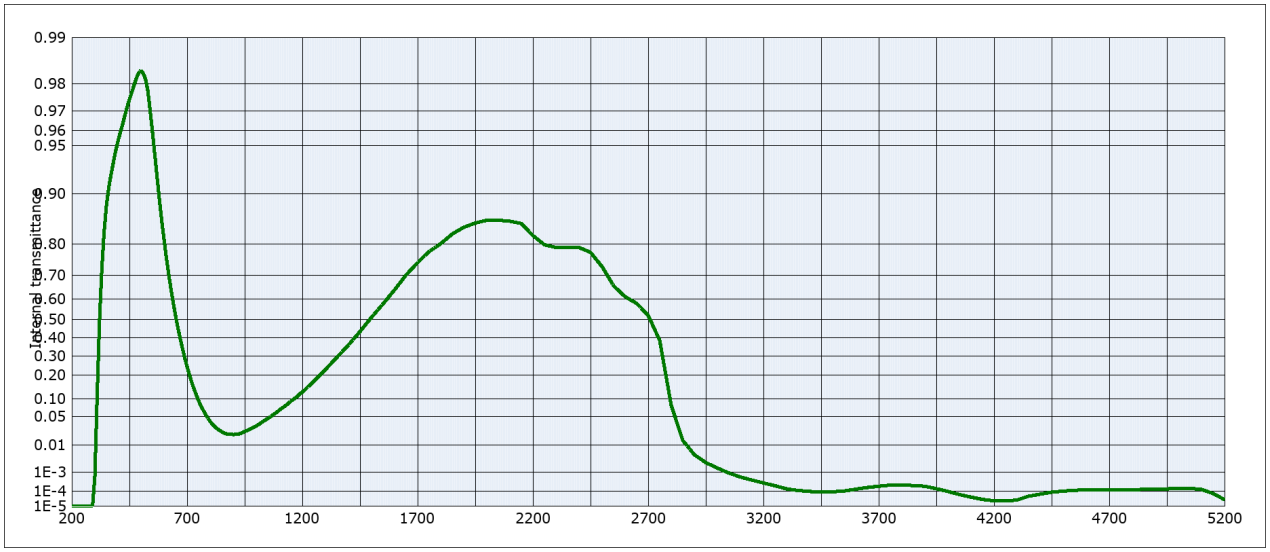

Internal transmittance τ_i at reference thickness d = 1 mm
The internal transmittance values, tabulated and graphically represented, are reference values only

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	0.984	800	$4.0 \cdot 10^{-2}$	1100	$6.6 \cdot 10^{-2}$	2200	0.821	3700	$2.0 \cdot 10^{-4}$
210	$< 10^{-5}$	510	0.983	810	$3.5 \cdot 10^{-2}$	1110	$7.1 \cdot 10^{-2}$	2250	0.797	3750	$2.3 \cdot 10^{-4}$
220	$< 10^{-5}$	520	0.981	820	$3.1 \cdot 10^{-2}$	1120	$7.5 \cdot 10^{-2}$	2300	0.790	3800	$2.3 \cdot 10^{-4}$
230	$< 10^{-5}$	530	0.978	830	$2.8 \cdot 10^{-2}$	1130	$8.1 \cdot 10^{-2}$	2350	0.791	3850	$2.2 \cdot 10^{-4}$
240	$< 10^{-5}$	540	0.970	840	$2.5 \cdot 10^{-2}$	1140	$8.6 \cdot 10^{-2}$	2400	0.790	3900	$2.0 \cdot 10^{-4}$
250	$< 10^{-5}$	550	0.959	850	$2.3 \cdot 10^{-2}$	1150	$9.3 \cdot 10^{-2}$	2450	0.776	3950	$1.4 \cdot 10^{-4}$
260	$< 10^{-5}$	560	0.943	860	$2.2 \cdot 10^{-2}$	1160	$9.9 \cdot 10^{-2}$	2500	0.730	4000	$1.0 \cdot 10^{-4}$
270	$< 10^{-5}$	570	0.921	870	$2.1 \cdot 10^{-2}$	1170	0.104	2550	0.657	4050	$6.5 \cdot 10^{-5}$
280	$< 10^{-5}$	580	0.891	880	$2.0 \cdot 10^{-2}$	1180	0.111	2600	0.610	4100	$4.4 \cdot 10^{-5}$
290	$< 10^{-5}$	590	0.854	890	$2.0 \cdot 10^{-2}$	1190	0.120	2650	0.579	4150	$3.1 \cdot 10^{-5}$
300	$6.5 \cdot 10^{-4}$	600	0.811	900	$2.0 \cdot 10^{-2}$	1200	0.126	2700	0.520	4200	$2.5 \cdot 10^{-5}$
310	0.114	610	0.760	910	$2.0 \cdot 10^{-2}$	1250	0.172	2750	0.385	4250	$2.4 \cdot 10^{-5}$
320	0.487	620	0.704	920	$2.0 \cdot 10^{-2}$	1300	0.228	2800	$8.0 \cdot 10^{-2}$	4300	$2.8 \cdot 10^{-5}$
330	0.718	630	0.644	930	$2.1 \cdot 10^{-2}$	1350	0.293	2850	$1.4 \cdot 10^{-2}$	4350	$5.0 \cdot 10^{-5}$
340	0.829	640	0.581	940	$2.2 \cdot 10^{-2}$	1400	0.360	2900	$5.0 \cdot 10^{-3}$	4400	$6.8 \cdot 10^{-5}$
350	0.881	650	0.518	950	$2.4 \cdot 10^{-2}$	1450	0.434	2950	$2.5 \cdot 10^{-3}$	4450	$9.0 \cdot 10^{-5}$
360	0.908	660	0.456	960	$2.5 \cdot 10^{-2}$	1500	0.510	3000	$1.5 \cdot 10^{-3}$	4500	$1.0 \cdot 10^{-4}$
370	0.924	670	0.397	970	$2.6 \cdot 10^{-2}$	1550	0.577	3050	$9.3 \cdot 10^{-4}$	4550	$1.2 \cdot 10^{-4}$
380	0.936	680	0.341	980	$2.8 \cdot 10^{-2}$	1600	0.640	3100	$6.0 \cdot 10^{-4}$	4600	$1.2 \cdot 10^{-4}$
390	0.946	690	0.289	990	$3.0 \cdot 10^{-2}$	1650	0.700	3150	$4.2 \cdot 10^{-4}$	4650	$1.3 \cdot 10^{-4}$
400	0.953	700	0.243	1000	$3.2 \cdot 10^{-2}$	1700	0.744	3200	$3.0 \cdot 10^{-4}$	4700	$1.3 \cdot 10^{-4}$
410	0.959	710	0.203	1010	$3.4 \cdot 10^{-2}$	1750	0.778	3250	$2.1 \cdot 10^{-4}$	4750	$1.3 \cdot 10^{-4}$
420	0.963	720	0.168	1020	$3.7 \cdot 10^{-2}$	1800	0.800	3300	$1.4 \cdot 10^{-4}$	4800	$1.3 \cdot 10^{-4}$
430	0.968	730	0.139	1030	$4.0 \cdot 10^{-2}$	1850	0.825	3350	$1.1 \cdot 10^{-4}$	4850	$1.3 \cdot 10^{-4}$
440	0.972	740	0.115	1040	$4.3 \cdot 10^{-2}$	1900	0.840	3400	$1.0 \cdot 10^{-4}$	4900	$1.3 \cdot 10^{-4}$
450	0.975	750	$9.5 \cdot 10^{-2}$	1050	$4.6 \cdot 10^{-2}$	1950	0.849	3450	$9.1 \cdot 10^{-5}$	4950	$1.4 \cdot 10^{-4}$
460	0.977	760	$7.8 \cdot 10^{-2}$	1060	$4.9 \cdot 10^{-2}$	2000	0.855	3500	$9.5 \cdot 10^{-5}$	5000	$1.6 \cdot 10^{-4}$
470	0.980	770	$6.6 \cdot 10^{-2}$	1070	$5.3 \cdot 10^{-2}$	2050	0.855	3550	$1.1 \cdot 10^{-4}$	5050	$1.5 \cdot 10^{-4}$
480	0.982	780	$5.5 \cdot 10^{-2}$	1080	$5.7 \cdot 10^{-2}$	2100	0.853	3600	$1.4 \cdot 10^{-4}$	5100	$1.3 \cdot 10^{-4}$
490	0.983	790	$4.7 \cdot 10^{-2}$	1090	$6.1 \cdot 10^{-2}$	2150	0.848	3650	$1.7 \cdot 10^{-4}$	5150	$7.5 \cdot 10^{-5}$

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