Data Sheet

SCHOTT

GG420

Reflection factor	
P_d	0.918

Reference thickness	
d [mm]	3

Spectral values guaranteed		
λ_c (τ_i = 0.5) [nm]	=	420 ± 6
λ_s ($\tau_{i,U}$ = 10^{-5}) [nm]	=	360
λ_p ($\tau_{i,L}$ = 0.93) [nm]	=	530

Refractive Index n
n_e (546.1 nm) = 1.530
n_d (587.6 nm) = 1.520
n_s (852.1 nm) = 1.520
n_t (1014.0 nm) = 1.510

Density	
ρ [g/cm^3]	2.55

Bubble content	
Bubble class	3

Chemical Resistance	
FR class	0
SR class	1.0
AR class	1.0

Transformation temperature	
Tg [°C]	535

Thermal expansion	
$\alpha_{-30/+70°C}$ [10^{-6}/K]	7.8
$\alpha_{20/300°C}$ [10^{-6}/K]	9.0
$\alpha_{20/200°C}$ [10^{-6}/K]	

Temperature coefficient	
T_K [nm/°C]	0.07

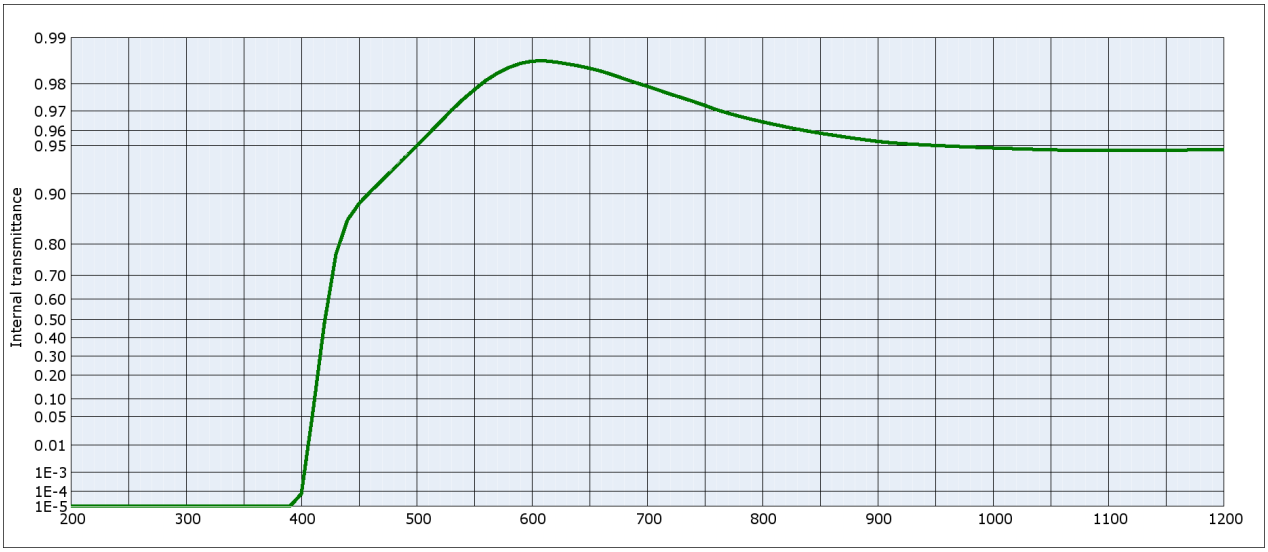
Notes
Colloidally colored glass
Longpass filter
All data wihout tolerances are to be understood to be reference values. Guaranteed values are only those values listed in the section "Spectral values guaranteed".

Colorimetric evaluation

Illuminant	A (Planck T = 2856 K)		
d [mm]	1	2	3
x	0.450	0.453	0.455
y	0.410	0.412	0.414
Y	91	90	90
λ_d [nm]	581	581	581
P_e	0.04	0.07	0.10

Illuminant	Planck T = 3200 K		
d [mm]	1	2	3
x	0.426	0.429	0.432
y	0.403	0.405	0.408
Y	91	90	90
λ_d [nm]	579	579	579
P_e	0.04	0.07	0.10

Illuminant	D65 (T_C = 6504 K)		
d [mm]	1	2	3
x	0.317	0.320	0.324
y	0.337	0.342	0.348
Y	91	90	89
λ_d [nm]	569	570	570
P_e	0.03	0.06	0.08



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Further explanations see 'Optical Filters 2013' catalogue

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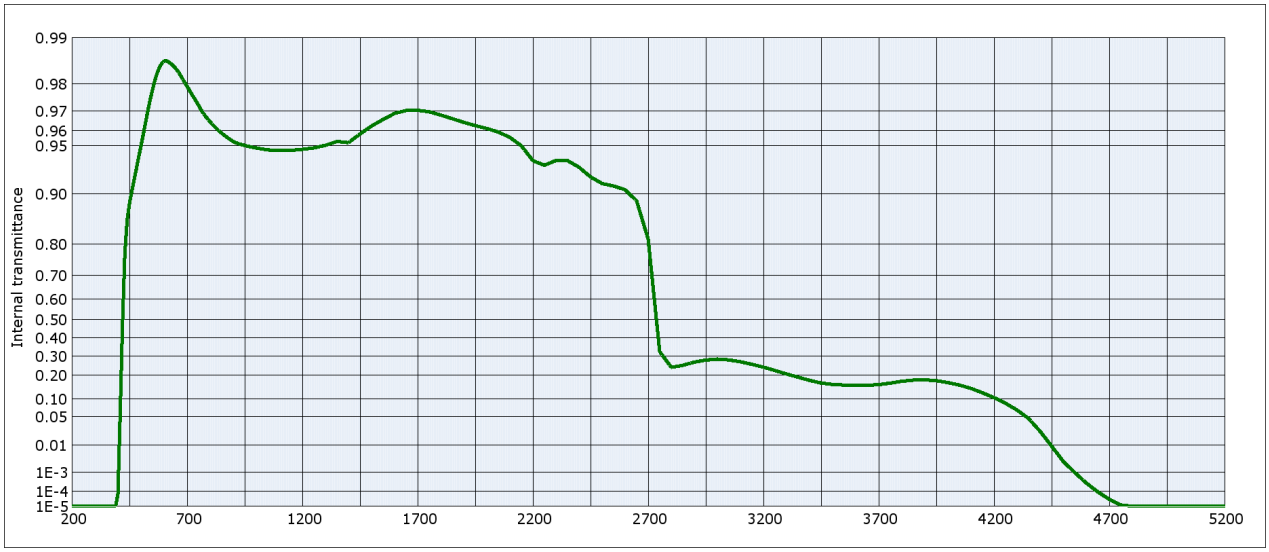

Internal transmittance τ_i at reference thickness d = 3 mm
The internal transmittance values, tabulated and graphically represented, are reference values only

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	0.950	800	0.965	1100	0.946	2200	0.938	3700	0.157
210	$< 10^{-5}$	510	0.958	810	0.964	1110	0.946	2250	0.934	3750	0.164
220	$< 10^{-5}$	520	0.964	820	0.962	1120	0.946	2300	0.938	3800	0.172
230	$< 10^{-5}$	530	0.970	830	0.961	1130	0.947	2350	0.938	3850	0.177
240	$< 10^{-5}$	540	0.975	840	0.960	1140	0.947	2400	0.932	3900	0.179
250	$< 10^{-5}$	550	0.978	850	0.958	1150	0.947	2450	0.921	3950	0.174
260	$< 10^{-5}$	560	0.981	860	0.957	1160	0.947	2500	0.914	4000	0.166
270	$< 10^{-5}$	570	0.983	870	0.956	1170	0.947	2550	0.910	4050	0.155
280	$< 10^{-5}$	580	0.984	880	0.955	1180	0.947	2600	0.906	4100	0.141
290	$< 10^{-5}$	590	0.985	890	0.954	1190	0.947	2650	0.889	4150	0.123
300	$< 10^{-5}$	600	0.986	900	0.953	1200	0.947	2700	0.812	4200	0.105
310	$< 10^{-5}$	610	0.986	910	0.952	1250	0.948	2750	0.324	4250	$8.6 \cdot 10^{-2}$
320	$< 10^{-5}$	620	0.986	920	0.952	1300	0.950	2800	0.240	4300	$6.6 \cdot 10^{-2}$
330	$< 10^{-5}$	630	0.985	930	0.951	1350	0.953	2850	0.250	4350	$4.6 \cdot 10^{-2}$
340	$< 10^{-5}$	640	0.985	940	0.951	1400	0.952	2900	0.267	4400	$2.4 \cdot 10^{-2}$
350	$< 10^{-5}$	650	0.984	950	0.950	1450	0.958	2950	0.278	4450	$9.5 \cdot 10^{-3}$
360	$< 10^{-5}$	660	0.983	960	0.950	1500	0.963	3000	0.283	4500	$2.9 \cdot 10^{-3}$
370	$< 10^{-5}$	670	0.983	970	0.949	1550	0.966	3050	0.279	4550	$9.8 \cdot 10^{-4}$
380	$< 10^{-5}$	680	0.981	980	0.949	1600	0.969	3100	0.269	4600	$3.0 \cdot 10^{-4}$
390	$< 10^{-5}$	690	0.980	990	0.949	1650	0.970	3150	0.255	4650	$9.5 \cdot 10^{-5}$
400	$7.0 \cdot 10^{-5}$	700	0.979	1000	0.948	1700	0.970	3200	0.240	4700	$3.1 \cdot 10^{-5}$
410	$6.1 \cdot 10^{-2}$	710	0.978	1010	0.948	1750	0.970	3250	0.224	4750	$1.3 \cdot 10^{-5}$
420	0.479	720	0.977	1020	0.948	1800	0.968	3300	0.206	4800	$< 10^{-5}$
430	0.770	730	0.975	1030	0.948	1850	0.966	3350	0.191	4850	$< 10^{-5}$
440	0.855	740	0.974	1040	0.947	1900	0.965	3400	0.176	4900	$< 10^{-5}$
450	0.885	750	0.972	1050	0.947	1950	0.963	3450	0.164	4950	$< 10^{-5}$
460	0.903	760	0.971	1060	0.947	2000	0.961	3500	0.158	5000	$< 10^{-5}$
470	0.918	770	0.969	1070	0.947	2050	0.959	3550	0.155	5050	$< 10^{-5}$
480	0.930	780	0.968	1080	0.947	2100	0.956	3600	0.154	5100	$< 10^{-5}$
490	0.941	790	0.966	1090	0.946	2150	0.950	3650	0.154	5150	$< 10^{-5}$

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