Data Sheet

SCHOTT

GG455

Reflection factor	
P_d	0.918

Reference thickness	
d [mm]	3

Spectral values guaranteed		
λ_c (τ_i = 0.5) [nm]	=	455 ± 6
λ_s ($\tau_{i,U}$ = 10^{-5}) [nm]	=	390
λ_p ($\tau_{i,L}$ = 0.92) [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]	2.56

Bubble content	
Bubble class	3

Chemical Resistance	
FR class	0
SR class	1.0
AR class	1.0

Transformation temperature	
Tg [°C]	529

Thermal expansion	
$\alpha_{-30/+70°C}$ [10^{-6}/K]	8.2
$\alpha_{20/300°C}$ [10^{-6}/K]	9.5
$\alpha_{20/200°C}$ [10^{-6}/K]	

Temperature coefficient	
T_K [nm/°C]	0.09

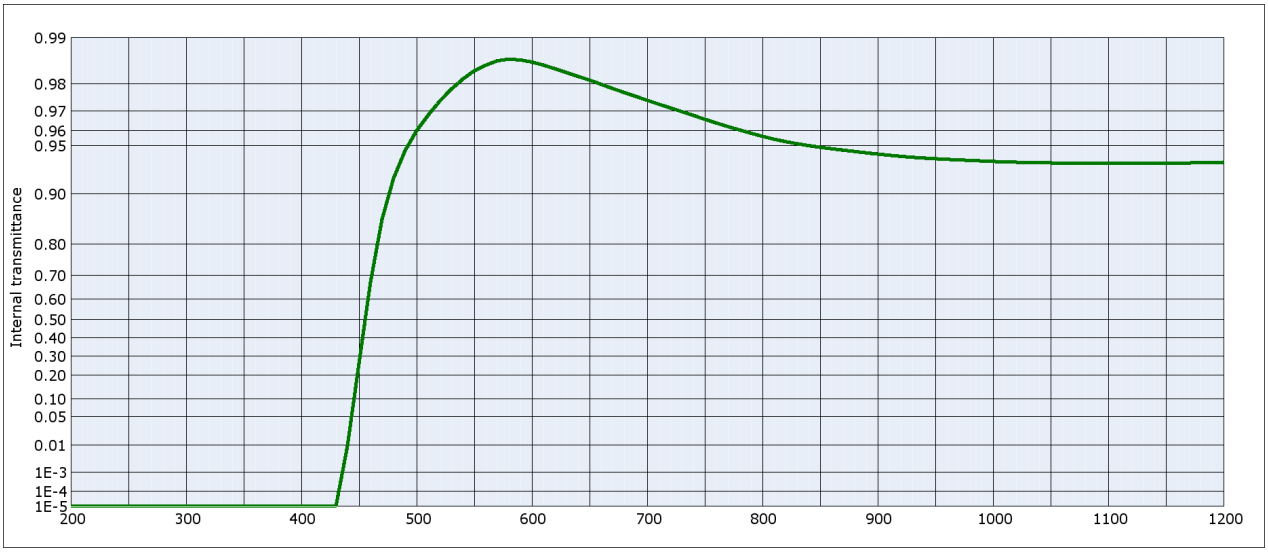
Notes
Colloidally colored glass
Longpass filter
All data wihout tolerances are to be understood to be reference values. Guaranteed values are only those values listed in the section "Spectral values guaranteed".

Colorimetric evaluation

Illuminant	A (Planck T = 2856 K)		
d [mm]	1	2	3
x	0.465	0.470	0.473
y	0.431	0.437	0.441
Y	91	90	90
λ_d [nm]	579	580	580
P_e	0.28	0.36	0.41

Illuminant	Planck T = 3200 K		
d [mm]	1	2	3
x	0.444	0.451	0.455
y	0.429	0.438	0.443
Y	91	90	90
λ_d [nm]	577	578	578
P_e	0.29	0.37	0.42

Illuminant	D65 (T_C = 6504 K)		
d [mm]	1	2	3
x	0.344	0.354	0.361
y	0.394	0.414	0.426
Y	91	90	89
λ_d [nm]	568	568	568
P_e	0.27	0.36	0.41



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Further explanations see 'Optical Filters 2013' catalogue

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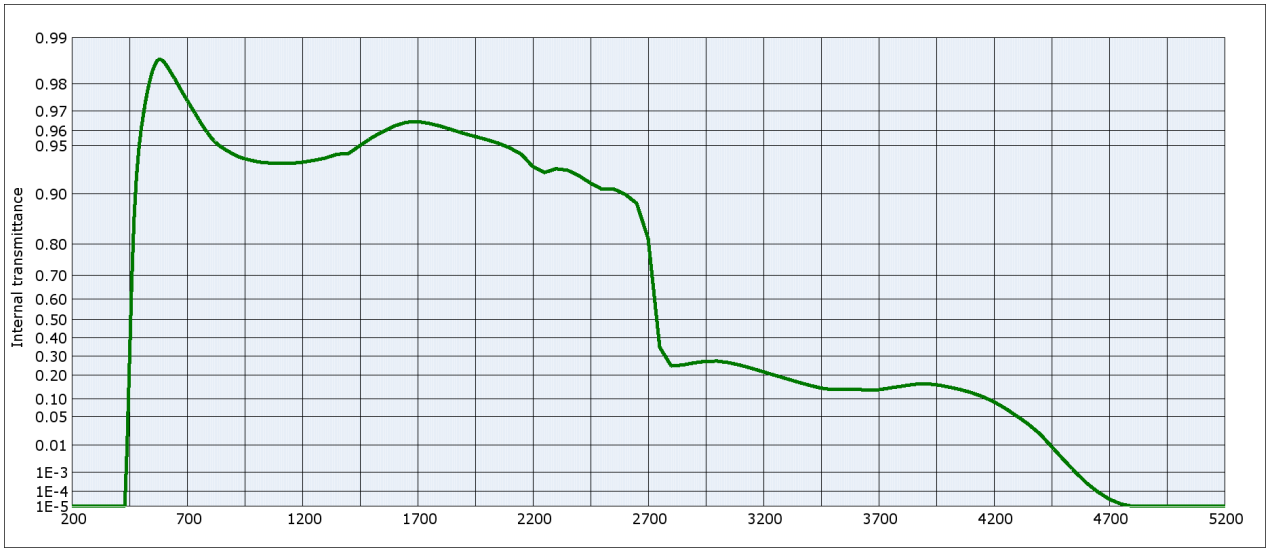

Internal transmittance τ_i at reference thickness d = 3 mm
The internal transmittance values, tabulated and graphically represented, are reference values only

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	0.960	800	0.956	1100	0.935	2200	0.932	3700	0.135
210	$< 10^{-5}$	510	0.968	810	0.955	1110	0.935	2250	0.926	3750	0.143
220	$< 10^{-5}$	520	0.974	820	0.953	1120	0.935	2300	0.930	3800	0.150
230	$< 10^{-5}$	530	0.978	830	0.951	1130	0.935	2350	0.929	3850	0.158
240	$< 10^{-5}$	540	0.981	840	0.950	1140	0.935	2400	0.923	3900	0.161
250	$< 10^{-5}$	550	0.984	850	0.949	1150	0.936	2450	0.914	3950	0.157
260	$< 10^{-5}$	560	0.985	860	0.948	1160	0.936	2500	0.906	4000	0.147
270	$< 10^{-5}$	570	0.986	870	0.947	1170	0.936	2550	0.907	4050	0.137
280	$< 10^{-5}$	580	0.986	880	0.946	1180	0.936	2600	0.899	4100	0.124
290	$< 10^{-5}$	590	0.986	890	0.945	1190	0.936	2650	0.885	4150	0.109
300	$< 10^{-5}$	600	0.986	900	0.944	1200	0.937	2700	0.813	4200	$9.1 \cdot 10^{-2}$
310	$< 10^{-5}$	610	0.985	910	0.943	1250	0.938	2750	0.348	4250	$7.1 \cdot 10^{-2}$
320	$< 10^{-5}$	620	0.984	920	0.942	1300	0.940	2800	0.247	4300	$5.1 \cdot 10^{-2}$
330	$< 10^{-5}$	630	0.983	930	0.941	1350	0.943	2850	0.252	4350	$3.5 \cdot 10^{-2}$
340	$< 10^{-5}$	640	0.982	940	0.940	1400	0.944	2900	0.263	4400	$2.0 \cdot 10^{-2}$
350	$< 10^{-5}$	650	0.981	950	0.940	1450	0.950	2950	0.271	4450	$9.1 \cdot 10^{-3}$
360	$< 10^{-5}$	660	0.980	960	0.939	1500	0.956	3000	0.272	4500	$3.4 \cdot 10^{-3}$
370	$< 10^{-5}$	670	0.979	970	0.939	1550	0.959	3050	0.264	4550	$1.1 \cdot 10^{-3}$
380	$< 10^{-5}$	680	0.977	980	0.938	1600	0.963	3100	0.251	4600	$3.1 \cdot 10^{-4}$
390	$< 10^{-5}$	690	0.976	990	0.938	1650	0.965	3150	0.234	4650	$9.5 \cdot 10^{-5}$
400	$< 10^{-5}$	700	0.974	1000	0.937	1700	0.965	3200	0.217	4700	$3.2 \cdot 10^{-5}$
410	$< 10^{-5}$	710	0.973	1010	0.937	1750	0.964	3250	0.200	4750	$1.5 \cdot 10^{-5}$
420	$< 10^{-5}$	720	0.971	1020	0.937	1800	0.963	3300	0.184	4800	$< 10^{-5}$
430	$< 10^{-5}$	730	0.970	1030	0.936	1850	0.960	3350	0.168	4850	$< 10^{-5}$
440	$9.6 \cdot 10^{-3}$	740	0.968	1040	0.936	1900	0.958	3400	0.154	4900	$< 10^{-5}$
450	0.260	750	0.966	1050	0.936	1950	0.956	3450	0.142	4950	$< 10^{-5}$
460	0.673	760	0.964	1060	0.936	2000	0.954	3500	0.136	5000	$< 10^{-5}$
470	0.857	770	0.962	1070	0.936	2050	0.952	3550	0.136	5050	$< 10^{-5}$
480	0.920	780	0.960	1080	0.935	2100	0.948	3600	0.138	5100	$< 10^{-5}$
490	0.946	790	0.958	1090	0.935	2150	0.943	3650	0.133	5150	$< 10^{-5}$

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