

Data Sheet



GG400

Density	
ρ [g/cm ³]	2.55

Notes
Colloidally colored glass
Longpass filter

Reflection factor	
P_d	0.918

Bubble content	
Bubble class	3

Reference thickness	
d [mm]	3

Chemical Resistance	
FR class	0
SR class	1.0
AR class	1.0

Spectral values guaranteed	
λ_c ($\tau_i = 0.5$) [nm]	= 400 ± 6
λ_s ($\tau_{i,U} = 10^{-5}$) [nm]	= 340
λ_p ($\tau_{i,L} = 0.93$) [nm]	= 480

Transformation temperature	
Tg [°C]	537

Thermal expansion	
$\alpha_{30/+70^\circ\text{C}}$ [10 ⁻⁶ /K]	7.9
$\alpha_{20/300^\circ\text{C}}$ [10 ⁻⁶ /K]	9.1
$\alpha_{20/200^\circ\text{C}}$ [10 ⁻⁶ /K]	

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_i (1014.0 nm) = 1.510	

Temperature coefficient	
T_K [nm/°C]	0.07

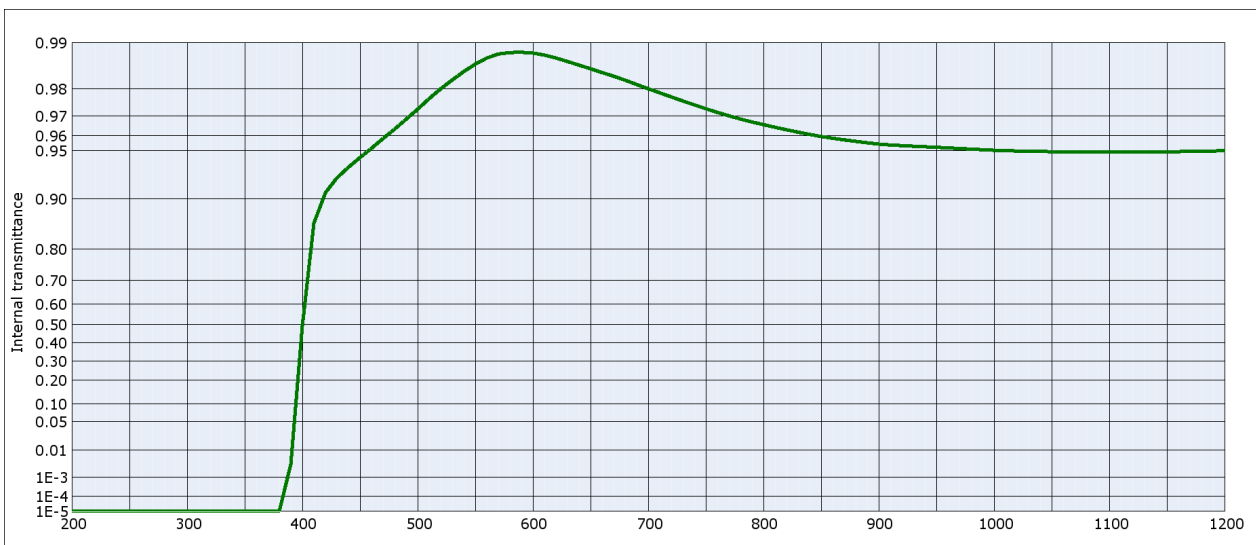
All data without tolerances are to be understood to be reference values.
Guaranteed values are only those values listed in the section "Spectral values guaranteed".

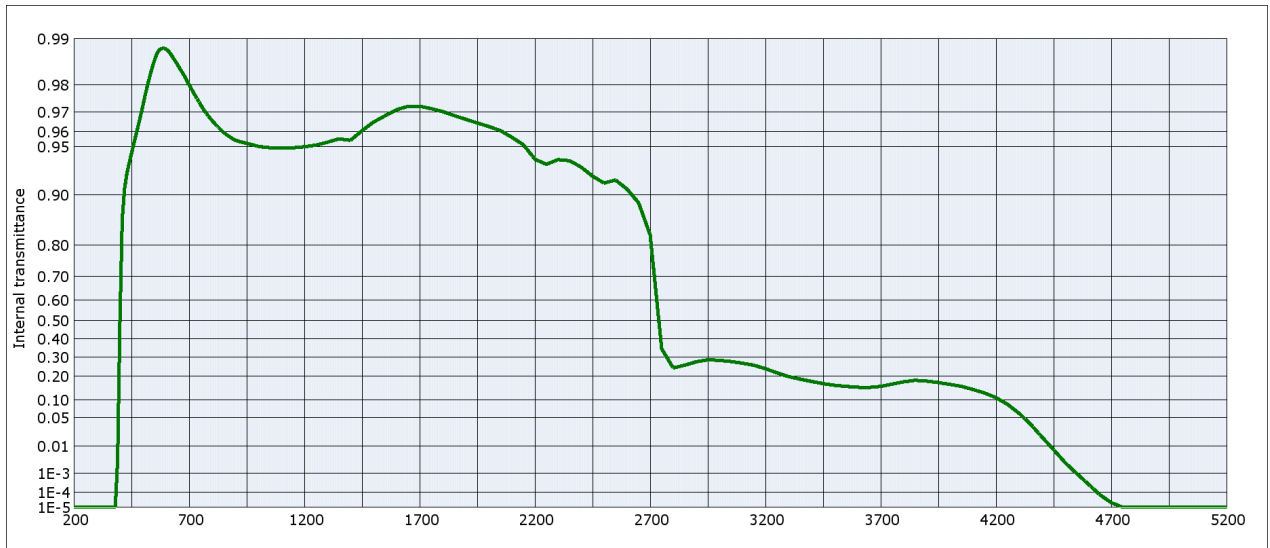
Colorimetric evaluation

Illuminant	A (Planck T = 2856 K)		
	1	2	3
d [mm]			
x	0.448	0.449	0.450
y	0.408	0.409	0.410
Y	91	91	90
λ_d [nm]	581	581	581
P_e	0.01	0.02	0.03

Illuminant	Planck T = 3200 K		
	1	2	3
d [mm]			
x	0.424	0.425	0.426
y	0.400	0.401	0.402
Y	91	91	90
λ_d [nm]	579	579	579
P_e	0.01	0.02	0.03

Illuminant	D65 (T _c = 6504 K)		
	1	2	3
d [mm]			
x	0.314	0.315	0.316
y	0.331	0.333	0.335
Y	91	91	90
λ_d [nm]	570	571	571
P_e	0.01	0.02	0.03





Internal transmittance τ_i at reference thickness $d = 3 \text{ mm}$ 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	0.973	800	0.966	1100	0.949	2200	0.940	3700	0.154
210	$< 10^{-5}$	510	0.977	810	0.965	1110	0.949	2250	0.935	3750	0.164
220	$< 10^{-5}$	520	0.980	820	0.963	1120	0.949	2300	0.940	3800	0.174
230	$< 10^{-5}$	530	0.982	830	0.962	1130	0.949	2350	0.939	3850	0.181
240	$< 10^{-5}$	540	0.985	840	0.961	1140	0.949	2400	0.933	3900	0.177
250	$< 10^{-5}$	550	0.986	850	0.959	1150	0.949	2450	0.923	3950	0.170
260	$< 10^{-5}$	560	0.987	860	0.958	1160	0.949	2500	0.915	4000	0.163
270	$< 10^{-5}$	570	0.988	870	0.957	1170	0.950	2550	0.919	4050	0.154
280	$< 10^{-5}$	580	0.988	880	0.956	1180	0.950	2600	0.908	4100	0.140
290	$< 10^{-5}$	590	0.988	890	0.956	1190	0.950	2650	0.888	4150	0.127
300	$< 10^{-5}$	600	0.988	900	0.955	1200	0.950	2700	0.825	4200	0.109
310	$< 10^{-5}$	610	0.988	910	0.954	1250	0.951	2750	0.344	4250	$8.6 \cdot 10^{-2}$
320	$< 10^{-5}$	620	0.987	920	0.954	1300	0.953	2800	0.242	4300	$6.0 \cdot 10^{-2}$
330	$< 10^{-5}$	630	0.987	930	0.953	1350	0.956	2850	0.256	4350	$3.7 \cdot 10^{-2}$
340	$< 10^{-5}$	640	0.986	940	0.953	1400	0.955	2900	0.274	4400	$1.8 \cdot 10^{-2}$
350	$< 10^{-5}$	650	0.985	950	0.953	1450	0.961	2950	0.285	4450	$7.9 \cdot 10^{-3}$
360	$< 10^{-5}$	660	0.984	960	0.952	1500	0.965	3000	0.282	4500	$2.8 \cdot 10^{-3}$
370	$< 10^{-5}$	670	0.983	970	0.952	1550	0.968	3050	0.276	4550	$9.8 \cdot 10^{-4}$
380	$< 10^{-5}$	680	0.982	980	0.951	1600	0.971	3100	0.267	4600	$3.0 \cdot 10^{-4}$
390	$3.4 \cdot 10^{-3}$	690	0.981	990	0.951	1650	0.972	3150	0.256	4650	$7.3 \cdot 10^{-5}$
400	0.491	700	0.980	1000	0.950	1700	0.973	3200	0.238	4700	$2.2 \cdot 10^{-5}$
410	0.859	710	0.979	1010	0.950	1750	0.972	3250	0.217	4750	$< 10^{-5}$
420	0.908	720	0.977	1020	0.950	1800	0.970	3300	0.199	4800	$< 10^{-5}$
430	0.926	730	0.976	1030	0.950	1850	0.968	3350	0.186	4850	$< 10^{-5}$
440	0.936	740	0.975	1040	0.950	1900	0.967	3400	0.176	4900	$< 10^{-5}$
450	0.945	750	0.973	1050	0.949	1950	0.965	3450	0.166	4950	$< 10^{-5}$
460	0.952	760	0.972	1060	0.949	2000	0.963	3500	0.159	5000	$< 10^{-5}$
470	0.958	770	0.970	1070	0.949	2050	0.961	3550	0.154	5050	$< 10^{-5}$
480	0.964	780	0.969	1080	0.949	2100	0.957	3600	0.150	5100	$< 10^{-5}$
490	0.969	790	0.967	1090	0.949	2150	0.951	3650	0.149	5150	$< 10^{-5}$