

NG11

Reflection factor	
P_d	0.92

Reference thickness	
d [mm]	1

Spectral values guaranteed		
τ_i (405 nm)	=	0.76 ± 0.02
τ_i (546 nm)	=	0.77 ± 0.02
τ_i (694 nm)	=	0.79 ± 0.02

Refractive index n		
λ [nm]	Element	n
404.7	Hg	1.51
587.6	He	1.50
1014	Hg	1.49

Density	
ρ [g/cm ³]	2.42

Bubble content	
Bubble class	2

Chemical resistance	
FR class	1
SR class	3.4
AR class	2.0

Transformation temperature	
T_g [°C]	481

Thermal expansion	
$\alpha_{-30/+70^\circ\text{C}}$ [10 ⁻⁶ /K]	6.9
$\alpha_{20/300^\circ\text{C}}$ [10 ⁻⁶ /K]	7.5
$\alpha_{20/200^\circ\text{C}}$ [10 ⁻⁶ /K]	

Temperature coefficient	
T_k [nm/°C]	

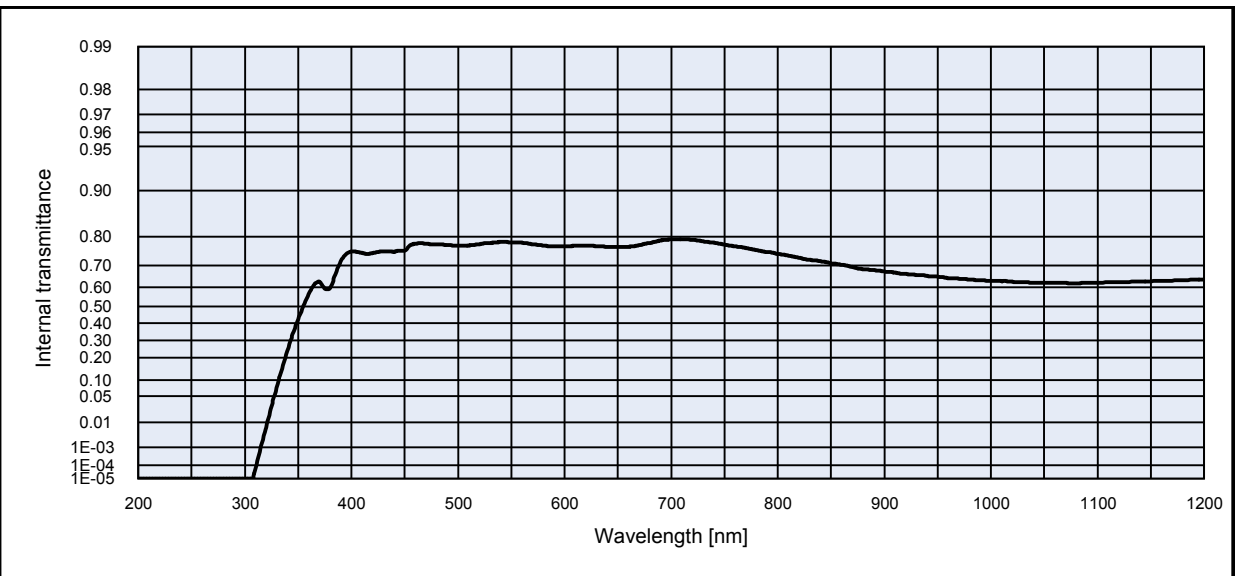
Notes

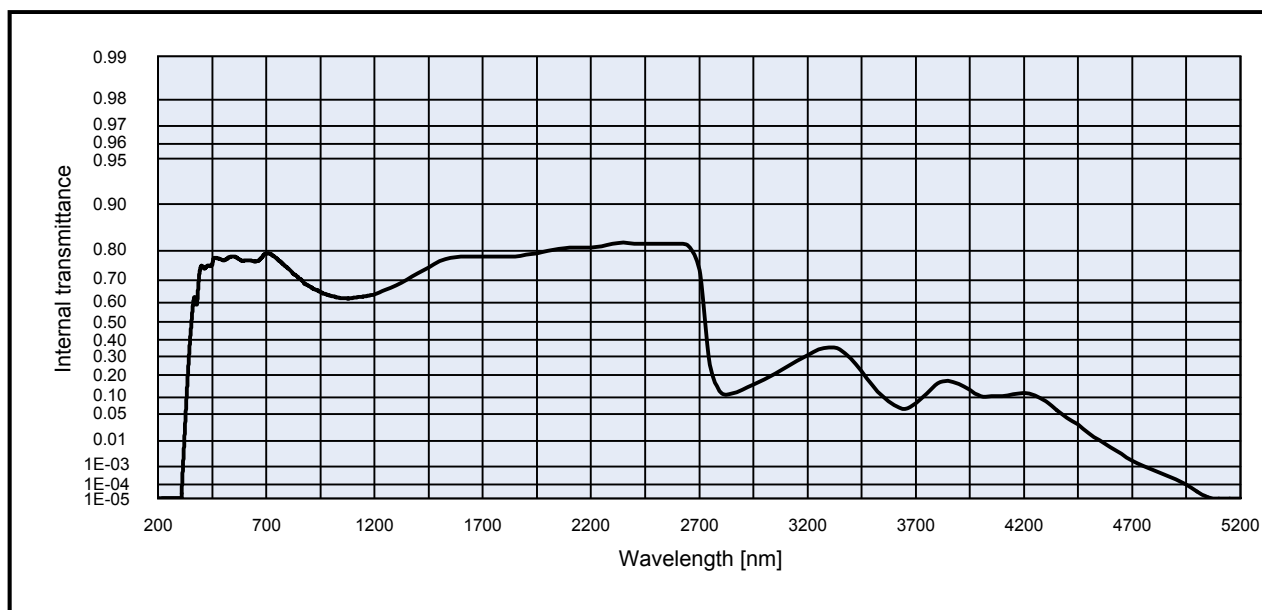
Ionically colored glass

Neutral density filter

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)			Illuminant Planck T = 3200 K			Illuminant D65 (T _c = 6504 K)					
d [mm]	1	2	3	d [mm]	1	2	3	d [mm]	1	2	3
x				x				x			
y				y				y			
Y				Y				Y			
λ_d [nm]				λ_d [nm]				λ_d [nm]			
P_e				P_e				P_e			





Internal transmittance τ_i at reference thickness d [mm] = 1
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	< 1.0E-05	500	7.7E-01	800	7.4E-01	1100	6.2E-01	2200	8.1E-01	3700	8.0E-02
210	< 1.0E-05	510	7.7E-01	810	7.4E-01	1110	6.3E-01	2250	8.1E-01	3750	1.2E-01
220	< 1.0E-05	520	7.8E-01	820	7.3E-01	1120	6.3E-01	2300	8.2E-01	3800	1.6E-01
230	< 1.0E-05	530	7.8E-01	830	7.2E-01	1130	6.3E-01	2350	8.2E-01	3850	1.7E-01
240	< 1.0E-05	540	7.8E-01	840	7.2E-01	1140	6.3E-01	2400	8.2E-01	3900	1.6E-01
250	< 1.0E-05	550	7.8E-01	850	7.1E-01	1150	6.3E-01	2450	8.2E-01	3950	1.3E-01
260	< 1.0E-05	560	7.8E-01	860	7.0E-01	1160	6.3E-01	2500	8.2E-01	4000	1.1E-01
270	< 1.0E-05	570	7.8E-01	870	6.9E-01	1170	6.3E-01	2550	8.2E-01	4050	1.1E-01
280	< 1.0E-05	580	7.7E-01	880	6.9E-01	1180	6.4E-01	2600	8.2E-01	4100	1.1E-01
290	< 1.0E-05	590	7.7E-01	890	6.8E-01	1190	6.4E-01	2650	8.1E-01	4150	1.1E-01
300	< 1.0E-05	600	7.7E-01	900	6.8E-01	1200	6.4E-01	2700	7.4E-01	4200	1.2E-01
310	5.1E-05	610	7.7E-01	910	6.7E-01	1250	6.6E-01	2750	2.5E-01	4250	1.1E-01
320	6.6E-03	620	7.7E-01	920	6.6E-01	1300	6.8E-01	2800	1.2E-01	4300	8.7E-02
330	7.4E-02	630	7.7E-01	930	6.6E-01	1350	7.0E-01	2850	1.2E-01	4350	6.0E-02
340	2.4E-01	640	7.7E-01	940	6.6E-01	1400	7.3E-01	2900	1.3E-01	4400	4.2E-02
350	4.2E-01	650	7.7E-01	950	6.5E-01	1450	7.5E-01	2950	1.5E-01	4450	2.9E-02
360	5.7E-01	660	7.7E-01	960	6.5E-01	1500	7.7E-01	3000	1.8E-01	4500	1.7E-02
370	6.3E-01	670	7.7E-01	970	6.4E-01	1550	7.8E-01	3050	2.1E-01	4550	1.0E-02
380	6.0E-01	680	7.8E-01	980	6.4E-01	1600	7.8E-01	3100	2.4E-01	4600	6.0E-03
390	7.2E-01	690	7.9E-01	990	6.4E-01	1650	7.8E-01	3150	2.8E-01	4650	3.5E-03
400	7.5E-01	700	7.9E-01	1000	6.3E-01	1700	7.8E-01	3200	3.1E-01	4700	1.8E-03
410	7.5E-01	710	7.9E-01	1010	6.3E-01	1750	7.8E-01	3250	3.4E-01	4750	1.1E-03
420	7.5E-01	720	7.9E-01	1020	6.3E-01	1800	7.8E-01	3300	3.5E-01	4800	6.6E-04
430	7.5E-01	730	7.9E-01	1030	6.3E-01	1850	7.8E-01	3350	3.4E-01	4850	3.8E-04
440	7.5E-01	740	7.8E-01	1040	6.2E-01	1900	7.9E-01	3400	2.9E-01	4900	2.1E-04
450	7.6E-01	750	7.8E-01	1050	6.2E-01	1950	7.9E-01	3450	2.2E-01	4950	1.0E-04
460	7.8E-01	760	7.7E-01	1060	6.2E-01	2000	8.0E-01	3500	1.5E-01	5000	3.2E-05
470	7.8E-01	770	7.7E-01	1070	6.2E-01	2050	8.1E-01	3550	1.0E-01	5050	1.3E-05
480	7.8E-01	780	7.6E-01	1080	6.2E-01	2100	8.1E-01	3600	7.4E-02	5100	< 1.0E-05
490	7.8E-01	790	7.5E-01	1090	6.2E-01	2150	8.1E-01	3650	6.3E-02	5150	< 1.0E-05