Data Sheet

SCHOTT

RG645

Density	
ρ [g/cm³]	2.65

Reflection factor	
P_d	0.92

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			
λc (τi = 0.50) [nm]	=	645	± 6
λs (τis = 1·10-5) [nm]	=	560	
λp (τip = 0.94) [nm]	=	720	

Transformation temperature	
Tg [°C]	519

Thermal expansion	
$\alpha_{-30/+70°C}$ [10^{-6}/K]	8.0
$\alpha_{20/300°C}$ [10^{-6}/K]	9.2
$\alpha_{20/200°C}$ [10^{-6}/K]	

Refractive index n		
λ [nm]	Element	n
587.6	He	1.52
852.1	Cs	1.52
1014	Hg	1.51

Temperature coefficient	
T_K [nm/°C]	0.16

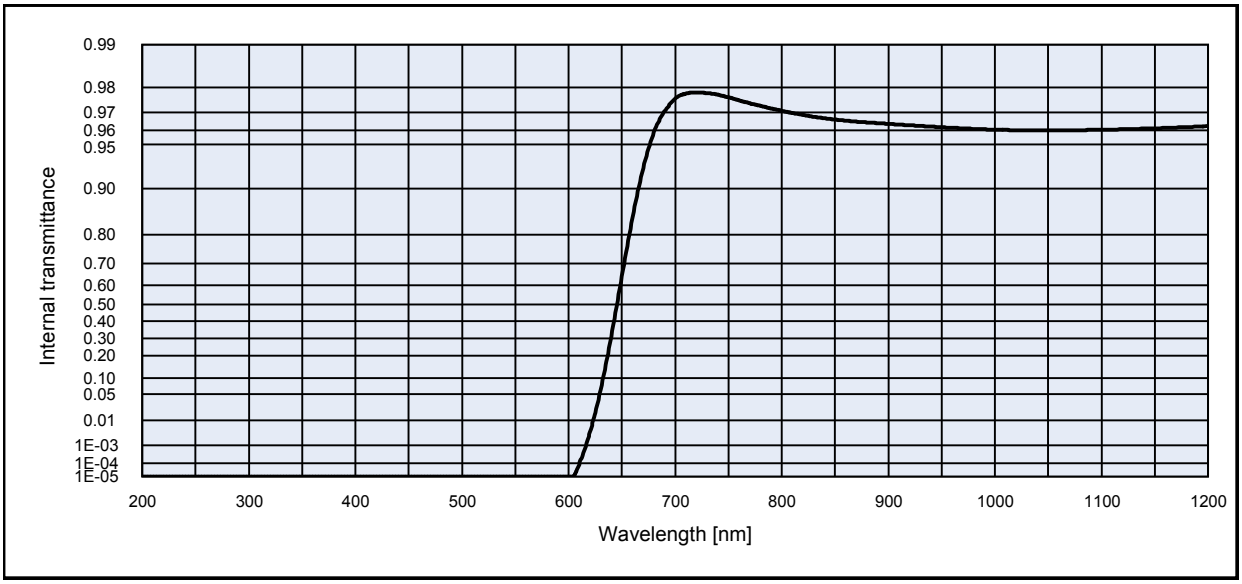
Notes
Colloidally colored glass
Long pass filter
All data without tolerances are to be understood to be reference values. Guaranteed values are only those values listed in the section "Spectral values guaranteed".

Colorimetric evaluation

Illuminant	A (Planck T = 2856 K)		
d [mm]	1	2	3
x	0.672	0.722	0.726
y	0.303	0.277	0.274
Y	9	5	4
λ_d [nm]	640	647	651
P_e	0.83	0.99	1.00

Illuminant	Planck T = 3200 K		
d [mm]	1	2	3
x	0.662	0.722	0.726
y	0.304	0.277	0.274
Y	8	4	3
λ_d [nm]	640	646	651
P_e	0.81	0.99	1.00

Illuminant	D65 (T_c = 6504 K)		
d [mm]	1	2	3
x	0.584	0.717	0.726
y	0.298	0.278	0.274
Y	5	2	2
λ_d [nm]	638	645	650
P_e	0.67	0.98	1.00



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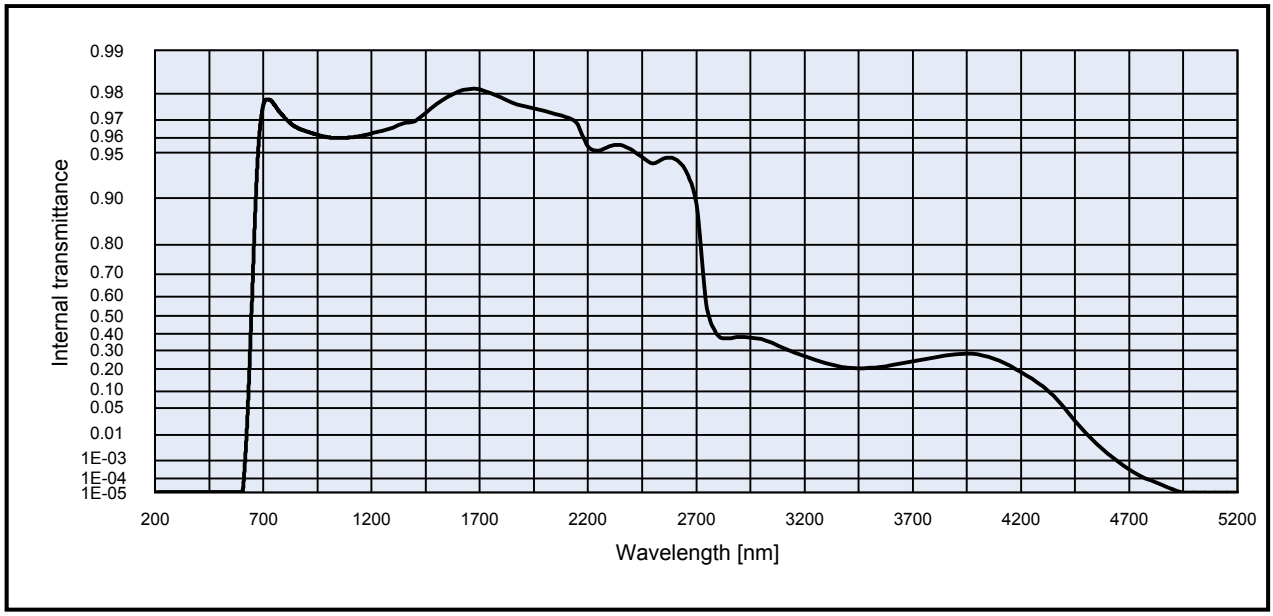

Internal transmittance τ_i at reference thickness d [mm] = 3
The internal transmittance values, tabulated and graphically represented, are reference values only

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	< 1.0E-05	800	9.7E-01	1100	9.6E-01	2200	9.5E-01	3700	2.4E-01
210	< 1.0E-05	510	< 1.0E-05	810	9.7E-01	1110	9.6E-01	2250	9.5E-01	3750	2.5E-01
220	< 1.0E-05	520	< 1.0E-05	820	9.7E-01	1120	9.6E-01	2300	9.5E-01	3800	2.6E-01
230	< 1.0E-05	530	< 1.0E-05	830	9.7E-01	1130	9.6E-01	2350	9.6E-01	3850	2.7E-01
240	< 1.0E-05	540	< 1.0E-05	840	9.7E-01	1140	9.6E-01	2400	9.5E-01	3900	2.8E-01
250	< 1.0E-05	550	< 1.0E-05	850	9.7E-01	1150	9.6E-01	2450	9.5E-01	3950	2.8E-01
260	< 1.0E-05	560	< 1.0E-05	860	9.7E-01	1160	9.6E-01	2500	9.4E-01	4000	2.8E-01
270	< 1.0E-05	570	< 1.0E-05	870	9.7E-01	1170	9.6E-01	2550	9.5E-01	4050	2.7E-01
280	< 1.0E-05	580	< 1.0E-05	880	9.6E-01	1180	9.6E-01	2600	9.4E-01	4100	2.4E-01
290	< 1.0E-05	590	< 1.0E-05	890	9.6E-01	1190	9.6E-01	2650	9.3E-01	4150	2.2E-01
300	< 1.0E-05	600	< 1.0E-05	900	9.6E-01	1200	9.6E-01	2700	8.9E-01	4200	1.8E-01
310	< 1.0E-05	610	7.6E-05	910	9.6E-01	1250	9.6E-01	2750	5.4E-01	4250	1.5E-01
320	< 1.0E-05	620	3.6E-03	920	9.6E-01	1300	9.7E-01	2800	3.9E-01	4300	1.2E-01
330	< 1.0E-05	630	6.1E-02	930	9.6E-01	1350	9.7E-01	2850	3.7E-01	4350	8.5E-02
340	< 1.0E-05	640	3.1E-01	940	9.6E-01	1400	9.7E-01	2900	3.8E-01	4400	5.1E-02
350	< 1.0E-05	650	6.5E-01	950	9.6E-01	1450	9.7E-01	2950	3.8E-01	4450	2.5E-02
360	< 1.0E-05	660	8.4E-01	960	9.6E-01	1500	9.8E-01	3000	3.7E-01	4500	1.2E-02
370	< 1.0E-05	670	9.3E-01	970	9.6E-01	1550	9.8E-01	3050	3.5E-01	4550	4.8E-03
380	< 1.0E-05	680	9.6E-01	980	9.6E-01	1600	9.8E-01	3100	3.2E-01	4600	2.0E-03
390	< 1.0E-05	690	9.7E-01	990	9.6E-01	1650	9.8E-01	3150	2.9E-01	4650	8.3E-04
400	< 1.0E-05	700	9.8E-01	1000	9.6E-01	1700	9.8E-01	3200	2.7E-01	4700	3.3E-04
410	< 1.0E-05	710	9.8E-01	1010	9.6E-01	1750	9.8E-01	3250	2.5E-01	4750	1.5E-04
420	< 1.0E-05	720	9.8E-01	1020	9.6E-01	1800	9.8E-01	3300	2.3E-01	4800	7.3E-05
430	< 1.0E-05	730	9.8E-01	1030	9.6E-01	1850	9.8E-01	3350	2.2E-01	4850	3.8E-05
440	< 1.0E-05	740	9.8E-01	1040	9.6E-01	1900	9.8E-01	3400	2.1E-01	4900	1.7E-05
450	< 1.0E-05	750	9.8E-01	1050	9.6E-01	1950	9.8E-01	3450	2.0E-01	4950	< 1.0E-05
460	< 1.0E-05	760	9.8E-01	1060	9.6E-01	2000	9.7E-01	3500	2.0E-01	5000	< 1.0E-05
470	< 1.0E-05	770	9.7E-01	1070	9.6E-01	2050	9.7E-01	3550	2.1E-01	5050	< 1.0E-05
480	< 1.0E-05	780	9.7E-01	1080	9.6E-01	2100	9.7E-01	3600	2.2E-01	5100	< 1.0E-05
490	< 1.0E-05	790	9.7E-01	1090	9.6E-01	2150	9.7E-01	3650	2.3E-01	5150	< 1.0E-05