Data Sheet

SCHOTT

RG630

Reflection factor	
P_d	0.918

Reference thickness	
d [mm]	3

Spectral values guaranteed		
λ_c (τ_i = 0.5) [nm]	=	630 ± 6
λ_s ($\tau_{i,U}$ = 10^{-5}) [nm]	=	540
λ_p ($\tau_{i,L}$ = 0.94) [nm]	=	710

Refractive Index n
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]	2.65

Bubble content	
Bubble class	3

Chemical Resistance	
FR class	0
SR class	1.0
AR class	1.0

Transformation temperature	
Tg [°C]	527

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]	

Temperature coefficient	
T_K [nm/°C]	0.14

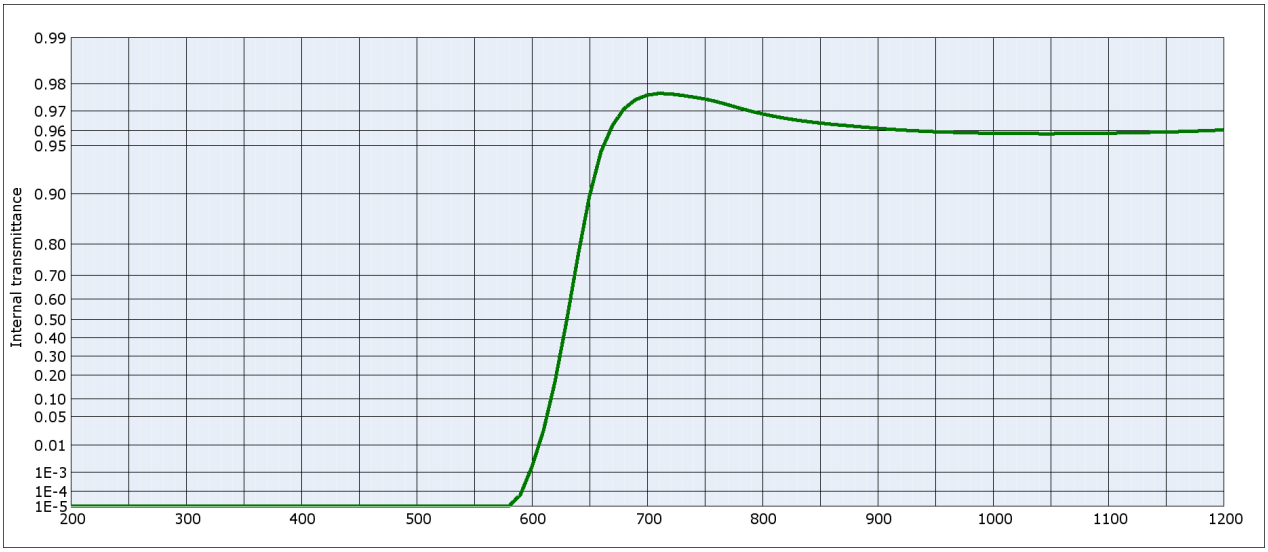
Notes
Colloidally colored glass
Longpass filter
All data wihout tolerances are to be understood to be reference values. Guaranteed values are only those values listed in the section "Spectral values guaranteed".

Colorimetric evaluation

Illuminant	A (Planck T = 2856 K)		
d [mm]	1	2	3
x	0.678	0.712	0.718
y	0.307	0.287	0.282
Y	15	9	8
λ_d [nm]	627	634	639
P_e	0.90	1.00	1.00

Illuminant	Planck T = 3200 K		
d [mm]	1	2	3
x	0.672	0.712	0.717
y	0.308	0.287	0.283
Y	14	8	7
λ_d [nm]	627	634	638
P_e	0.89	1.00	1.00

Illuminant	D65 (T_C = 6504 K)		
d [mm]	1	2	3
x	0.624	0.708	0.716
y	0.305	0.289	0.284
Y	9	5	4
λ_d [nm]	625	633	637
P_e	0.80	0.99	1.00



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Further explanations see 'Optical Filters 2013' catalogue

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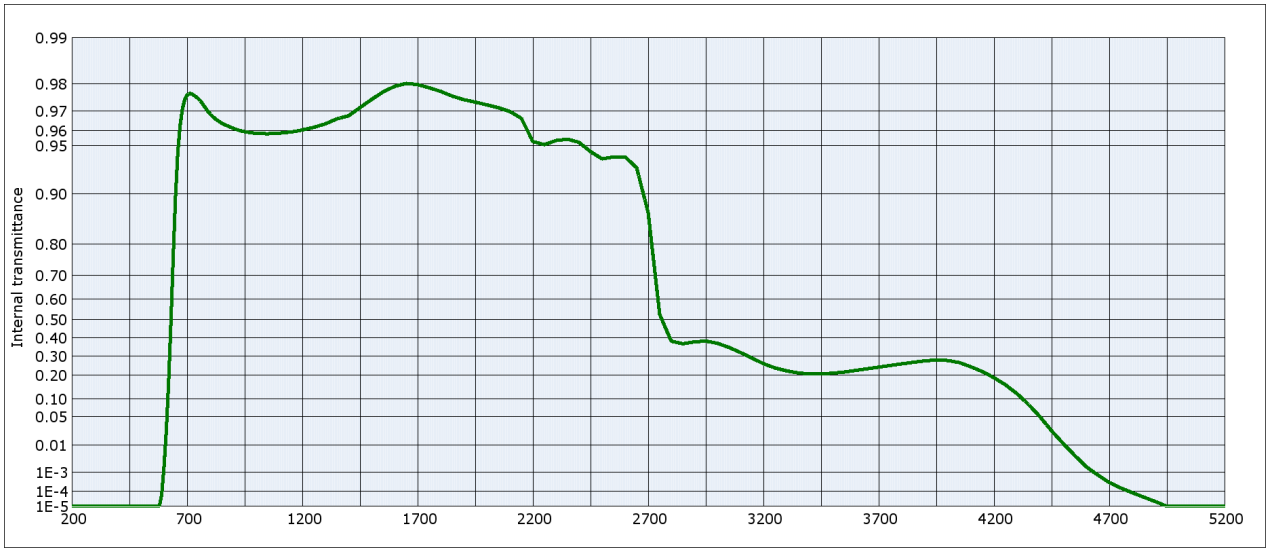

Internal transmittance τ_i at reference thickness d = 3 mm
The internal transmittance values, tabulated and graphically represented, are reference values only

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	$< 10^{-5}$	800	0.969	1100	0.958	2200	0.953	3700	0.241
210	$< 10^{-5}$	510	$< 10^{-5}$	810	0.968	1110	0.959	2250	0.951	3750	0.250
220	$< 10^{-5}$	520	$< 10^{-5}$	820	0.967	1120	0.959	2300	0.954	3800	0.258
230	$< 10^{-5}$	530	$< 10^{-5}$	830	0.966	1130	0.959	2350	0.955	3850	0.266
240	$< 10^{-5}$	540	$< 10^{-5}$	840	0.965	1140	0.959	2400	0.953	3900	0.274
250	$< 10^{-5}$	550	$< 10^{-5}$	850	0.964	1150	0.959	2450	0.946	3950	0.278
260	$< 10^{-5}$	560	$< 10^{-5}$	860	0.964	1160	0.959	2500	0.940	4000	0.275
270	$< 10^{-5}$	570	$< 10^{-5}$	870	0.963	1170	0.960	2550	0.941	4050	0.264
280	$< 10^{-5}$	580	$< 10^{-5}$	880	0.962	1180	0.960	2600	0.941	4100	0.243
290	$< 10^{-5}$	590	$6.2 \cdot 10^{-5}$	890	0.962	1190	0.960	2650	0.931	4150	0.218
300	$< 10^{-5}$	600	$1.7 \cdot 10^{-3}$	900	0.961	1200	0.960	2700	0.870	4200	0.188
310	$< 10^{-5}$	610	$2.5 \cdot 10^{-2}$	910	0.961	1250	0.962	2750	0.524	4250	0.156
320	$< 10^{-5}$	620	0.169	920	0.960	1300	0.964	2800	0.381	4300	0.120
330	$< 10^{-5}$	630	0.487	930	0.960	1350	0.966	2850	0.367	4350	$8.3 \cdot 10^{-2}$
340	$< 10^{-5}$	640	0.765	940	0.960	1400	0.968	2900	0.378	4400	$4.9 \cdot 10^{-2}$
350	$< 10^{-5}$	650	0.897	950	0.959	1450	0.972	2950	0.382	4450	$2.4 \cdot 10^{-2}$
360	$< 10^{-5}$	660	0.946	960	0.959	1500	0.975	3000	0.370	4500	$1.1 \cdot 10^{-2}$
370	$< 10^{-5}$	670	0.963	970	0.959	1550	0.977	3050	0.347	4550	$4.7 \cdot 10^{-3}$
380	$< 10^{-5}$	680	0.971	980	0.959	1600	0.979	3100	0.319	4600	$1.7 \cdot 10^{-3}$
390	$< 10^{-5}$	690	0.975	990	0.959	1650	0.980	3150	0.288	4650	$7.5 \cdot 10^{-4}$
400	$< 10^{-5}$	700	0.976	1000	0.958	1700	0.980	3200	0.259	4700	$3.2 \cdot 10^{-4}$
410	$< 10^{-5}$	710	0.977	1010	0.958	1750	0.979	3250	0.237	4750	$1.6 \cdot 10^{-4}$
420	$< 10^{-5}$	720	0.977	1020	0.958	1800	0.978	3300	0.222	4800	$8.4 \cdot 10^{-5}$
430	$< 10^{-5}$	730	0.976	1030	0.958	1850	0.976	3350	0.212	4850	$4.4 \cdot 10^{-5}$
440	$< 10^{-5}$	740	0.976	1040	0.958	1900	0.975	3400	0.206	4900	$2.2 \cdot 10^{-5}$
450	$< 10^{-5}$	750	0.975	1050	0.958	1950	0.974	3450	0.206	4950	$< 10^{-5}$
460	$< 10^{-5}$	760	0.974	1060	0.958	2000	0.973	3500	0.210	5000	$< 10^{-5}$
470	$< 10^{-5}$	770	0.973	1070	0.958	2050	0.971	3550	0.216	5050	$< 10^{-5}$
480	$< 10^{-5}$	780	0.971	1080	0.958	2100	0.970	3600	0.224	5100	$< 10^{-5}$
490	$< 10^{-5}$	790	0.970	1090	0.958	2150	0.967	3650	0.232	5150	$< 10^{-5}$

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