

DATA SHEET

SCHOTT RG780

RG780

Reflection factor	
P_d	0.908

Reference thickness	
d [mm]	3

Spectral values guaranteed

λ_c ($\tau_i = 0.5$) [nm]	=	780 ± 9
λ_s ($\tau_{i,U} = 0.00001$) [nm]	=	610
λ_p ($\tau_{i,L} = 0.97$) [nm]	=	900

Refractive index n

n_i (365.0 nm) =	1.590
n_h (404.7 nm) =	1.581
n_g (435.8 nm) =	1.576
n_F (480.0 nm) =	1.570
Sellmeier coefficients on request	

Density	
ρ [g/cm ³]	2.94

Bubble content	
Bubble class	3

Chemical Resistance	
FR class	5.0
SR class	53.4
AR class	1.3

Transformation temperature	
T_g [°C]	552

Thermal expansion	
$\alpha_{-30/+70} [10^{-6}/K]$	9.5
$\alpha_{20/300} [10^{-6}/K]$	10.5
$\alpha_{20/200} [10^{-6}/K]$	

Temperature coefficient

T_K [nm/°C]	0.22

Notes

Colloidally colored glass
Longpass filter

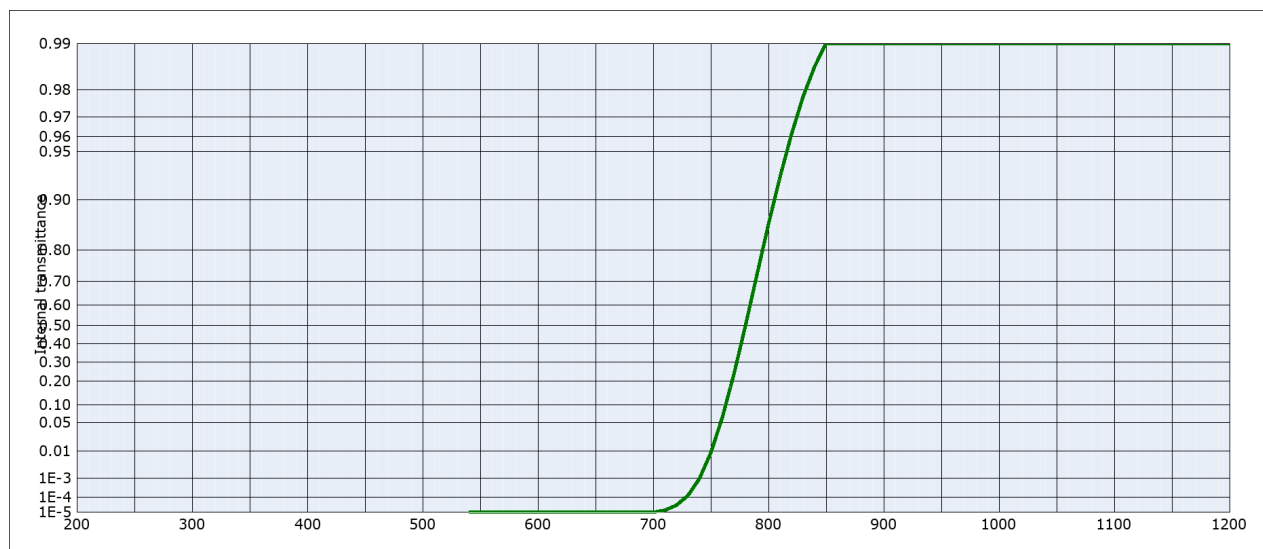
All data without tolerances are to be understood to be reference values.

Guaranteed values are only those values listed in the section

"Spectral values guaranteed".

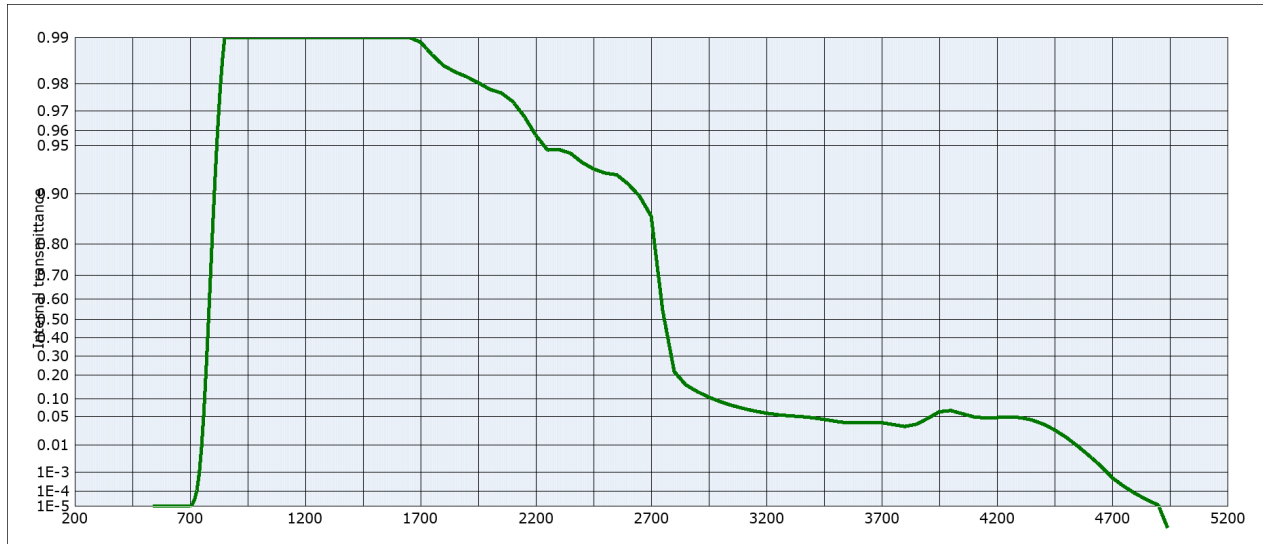
Colorimetric evaluation

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]
x				x				x			
y				y				y			
Y				Y				Y			
λ_d [nm]				λ_d [nm]				λ_d [nm]			
P _e				P _e				P _e			



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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	$< 10^{-5}$	800	0.859	1100	0.994	2200	0.957	3700	$3.8 \cdot 10^{-2}$
210	$< 10^{-5}$	510	$< 10^{-5}$	810	0.928	1110	0.994	2250	0.947	3750	$3.4 \cdot 10^{-2}$
220	$< 10^{-5}$	520	$< 10^{-5}$	820	0.961	1120	0.994	2300	0.947	3800	$3.1 \cdot 10^{-2}$
230	$< 10^{-5}$	530	$< 10^{-5}$	830	0.978	1130	0.994	2350	0.944	3850	$3.5 \cdot 10^{-2}$
240	$< 10^{-5}$	540	$< 10^{-5}$	840	0.986	1140	0.994	2400	0.936	3900	$4.6 \cdot 10^{-2}$
250	$< 10^{-5}$	550	$< 10^{-5}$	850	0.990	1150	0.995	2450	0.930	3950	$6.2 \cdot 10^{-2}$
260	$< 10^{-5}$	560	$< 10^{-5}$	860	0.991	1160	0.995	2500	0.926	4000	$6.5 \cdot 10^{-2}$
270	$< 10^{-5}$	570	$< 10^{-5}$	870	0.992	1170	0.995	2550	0.924	4050	$5.7 \cdot 10^{-2}$
280	$< 10^{-5}$	580	$< 10^{-5}$	880	0.992	1180	0.995	2600	0.913	4100	$4.9 \cdot 10^{-2}$
290	$< 10^{-5}$	590	$< 10^{-5}$	890	0.993	1190	0.995	2650	0.896	4150	$4.7 \cdot 10^{-2}$
300	$< 10^{-5}$	600	$< 10^{-5}$	900	0.993	1200	0.995	2700	0.863	4200	$4.8 \cdot 10^{-2}$
310	$< 10^{-5}$	610	$< 10^{-5}$	910	0.993	1250	0.995	2750	0.544	4250	$4.9 \cdot 10^{-2}$
320	$< 10^{-5}$	620	$< 10^{-5}$	920	0.993	1300	0.995	2800	0.218	4300	$4.8 \cdot 10^{-2}$
330	$< 10^{-5}$	630	$< 10^{-5}$	930	0.993	1350	0.995	2850	0.156	4350	$4.3 \cdot 10^{-2}$
340	$< 10^{-5}$	640	$< 10^{-5}$	940	0.993	1400	0.993	2900	0.128	4400	$3.5 \cdot 10^{-2}$
350	$< 10^{-5}$	650	$< 10^{-5}$	950	0.993	1450	0.993	2950	0.107	4450	$2.6 \cdot 10^{-2}$
360	$< 10^{-5}$	660	$< 10^{-5}$	960	0.993	1500	0.994	3000	$9.1 \cdot 10^{-2}$	4500	$1.7 \cdot 10^{-2}$
370	$< 10^{-5}$	670	$< 10^{-5}$	970	0.993	1550	0.994	3050	$8.0 \cdot 10^{-2}$	4550	$9.4 \cdot 10^{-3}$
380	$< 10^{-5}$	680	$< 10^{-5}$	980	0.994	1600	0.993	3100	$7.1 \cdot 10^{-2}$	4600	$4.6 \cdot 10^{-3}$
390	$< 10^{-5}$	690	$< 10^{-5}$	990	0.994	1650	0.991	3150	$6.4 \cdot 10^{-2}$	4650	$1.9 \cdot 10^{-3}$
400	$< 10^{-5}$	700	$< 10^{-5}$	1000	0.994	1700	0.989	3200	$5.8 \cdot 10^{-2}$	4700	$5.5 \cdot 10^{-4}$
410	$< 10^{-5}$	710	$1.4 \cdot 10^{-5}$	1010	0.994	1750	0.987	3250	$5.4 \cdot 10^{-2}$	4750	$2.0 \cdot 10^{-4}$
420	$< 10^{-5}$	720	$3.2 \cdot 10^{-5}$	1020	0.994	1800	0.985	3300	$5.2 \cdot 10^{-2}$	4800	$7.4 \cdot 10^{-5}$
430	$< 10^{-5}$	730	$1.3 \cdot 10^{-4}$	1030	0.994	1850	0.983	3350	$5.0 \cdot 10^{-2}$	4850	$3.0 \cdot 10^{-5}$
440	$< 10^{-5}$	740	$9.3 \cdot 10^{-4}$	1040	0.994	1900	0.982	3400	$4.8 \cdot 10^{-2}$	4900	$1.2 \cdot 10^{-5}$
450	$< 10^{-5}$	750	$8.9 \cdot 10^{-3}$	1050	0.994	1950	0.980	3450	$4.4 \cdot 10^{-2}$	4950	$< 10^{-5}$
460	$< 10^{-5}$	760	$6.3 \cdot 10^{-2}$	1060	0.994	2000	0.978	3500	$4.0 \cdot 10^{-2}$	5000	$< 10^{-5}$
470	$< 10^{-5}$	770	0.235	1070	0.994	2050	0.977	3550	$3.7 \cdot 10^{-2}$	5050	$< 10^{-5}$
480	$< 10^{-5}$	780	0.496	1080	0.994	2100	0.974	3600	$3.7 \cdot 10^{-2}$	5100	$< 10^{-5}$
490	$< 10^{-5}$	790	0.722	1090	0.994	2150	0.967	3650	$3.8 \cdot 10^{-2}$	5150	$< 10^{-5}$