

Data Sheet



S8612

Density	
ρ [g/cm ³]	2.66

Notes

Ionically colored glass
Bandpass filter / shortpass filter
Color compensating filter / IR cut filter

Reflection factor	
P_d	0.914

Bubble content	
Bubble class	1

Reference thickness	
d [mm]	1

Chemical Resistance	
FR class	0
SR class	3.0
AR class	3.0

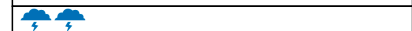
Spectral values guaranteed		
τ_i (500nm)	\geq	0.96
τ_i (600nm)	\geq	0.48
τ_i (700nm)	$<$	0.02
$\lambda(\tau_i, \text{max})$ [nm]	$=$	500 \pm 5

Transformation temperature	
T_g [°C]	391

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

Refractive Index n	
n_d (587.6 nm) =	1.540

Temperature coefficient	
T_K [nm/°C]	



Long-term changes of the polished surface are possible.

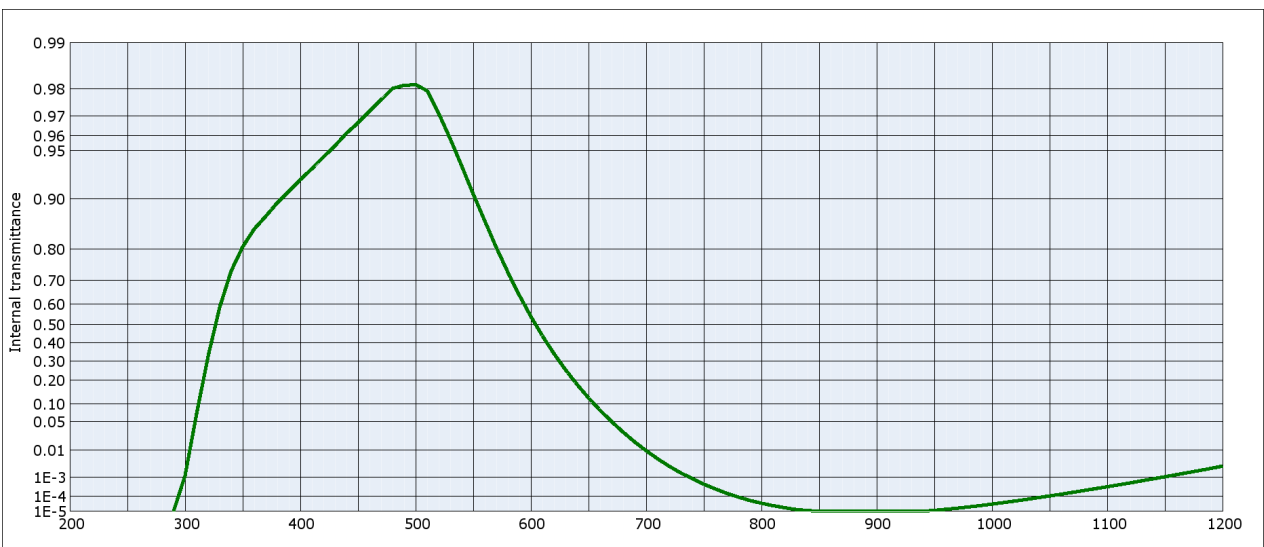
All data without tolerances are to be understood to be reference values.
Guaranteed values are only those values listed in the section "Spectral values guaranteed".

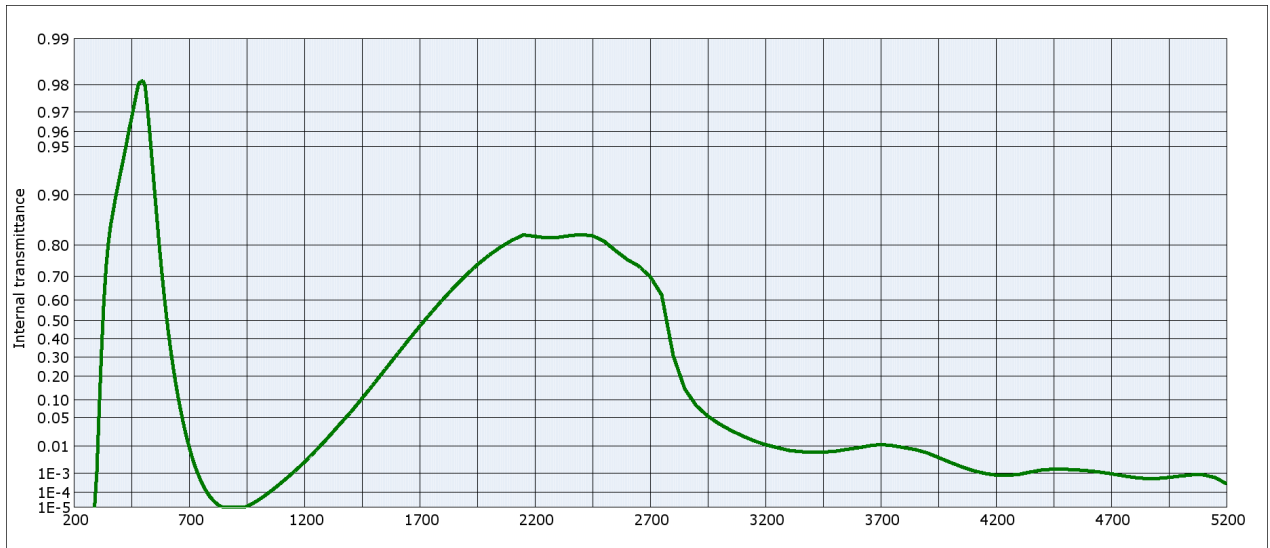
Colorimetric evaluation

Illuminant	A (Planck T = 2856 K)		
	1	2	3
d [mm]			
x	0.356	0.301	0.265
y	0.433	0.440	0.440
Y	65	52	44
λ_d [nm]	500	499	498
P_e	0.21	0.34	0.42

Illuminant	Planck T = 3200 K		
	1	2	3
d [mm]			
x	0.335	0.284	0.250
y	0.417	0.419	0.415
Y	66	54	46
λ_d [nm]	498	497	496
P_e	0.21	0.34	0.43

Illuminant	D65 ($T_c = 6504$ K)		
	1	2	3
d [mm]			
x	0.251	0.218	0.198
y	0.321	0.311	0.302
Y	72	62	54
λ_d [nm]	490	489	489
P_e	0.23	0.36	0.44





Internal transmittance τ_i at reference thickness $d = 1$ 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	0.981	800	$3.7 \cdot 10^{-5}$	1100	$3.5 \cdot 10^{-4}$	2200	0.821	3700	$1.1 \cdot 10^{-2}$
210	$< 10^{-5}$	510	0.979	810	$2.5 \cdot 10^{-5}$	1110	$4.4 \cdot 10^{-4}$	2250	0.818	3750	$1.0 \cdot 10^{-2}$
220	$< 10^{-5}$	520	0.971	820	$1.8 \cdot 10^{-5}$	1120	$5.5 \cdot 10^{-4}$	2300	0.819	3800	$9.1 \cdot 10^{-3}$
230	$< 10^{-5}$	530	0.958	830	$1.4 \cdot 10^{-5}$	1130	$6.9 \cdot 10^{-4}$	2350	0.823	3850	$7.9 \cdot 10^{-3}$
240	$< 10^{-5}$	540	0.938	840	$1.1 \cdot 10^{-5}$	1140	$8.5 \cdot 10^{-4}$	2400	0.826	3900	$6.3 \cdot 10^{-3}$
250	$< 10^{-5}$	550	0.906	850	$< 10^{-5}$	1150	$1.1 \cdot 10^{-3}$	2450	0.823	3950	$4.3 \cdot 10^{-3}$
260	$< 10^{-5}$	560	0.863	860	$< 10^{-5}$	1160	$1.3 \cdot 10^{-3}$	2500	0.809	4000	$2.9 \cdot 10^{-3}$
270	$< 10^{-5}$	570	0.803	870	$< 10^{-5}$	1170	$1.6 \cdot 10^{-3}$	2550	0.783	4050	$1.9 \cdot 10^{-3}$
280	$< 10^{-5}$	580	0.728	880	$< 10^{-5}$	1180	$1.9 \cdot 10^{-3}$	2600	0.757	4100	$1.3 \cdot 10^{-3}$
290	$< 10^{-5}$	590	0.638	890	$< 10^{-5}$	1190	$2.4 \cdot 10^{-3}$	2650	0.735	4150	$9.9 \cdot 10^{-4}$
300	$1.2 \cdot 10^{-3}$	600	0.539	900	$< 10^{-5}$	1200	$2.9 \cdot 10^{-3}$	2700	0.697	4200	$8.2 \cdot 10^{-4}$
310	$7.0 \cdot 10^{-2}$	610	0.438	910	$< 10^{-5}$	1250	$7.4 \cdot 10^{-3}$	2750	0.622	4250	$8.1 \cdot 10^{-4}$
320	0.326	620	0.340	920	$< 10^{-5}$	1300	$1.7 \cdot 10^{-2}$	2800	0.307	4300	$8.9 \cdot 10^{-4}$
330	0.584	630	0.253	930	$< 10^{-5}$	1350	$3.5 \cdot 10^{-2}$	2850	0.143	4350	$1.1 \cdot 10^{-3}$
340	0.732	640	0.181	940	$< 10^{-5}$	1400	$6.3 \cdot 10^{-2}$	2900	$8.2 \cdot 10^{-2}$	4400	$1.4 \cdot 10^{-3}$
350	0.805	650	0.123	950	$1.2 \cdot 10^{-5}$	1450	0.106	2950	$5.3 \cdot 10^{-2}$	4450	$1.5 \cdot 10^{-3}$
360	0.847	660	$8.0 \cdot 10^{-2}$	960	$1.4 \cdot 10^{-5}$	1500	0.163	3000	$3.7 \cdot 10^{-2}$	4500	$1.5 \cdot 10^{-3}$
370	0.872	670	$5.0 \cdot 10^{-2}$	970	$1.7 \cdot 10^{-5}$	1550	0.233	3050	$2.7 \cdot 10^{-2}$	4550	$1.4 \cdot 10^{-3}$
380	0.894	680	$3.0 \cdot 10^{-2}$	980	$2.1 \cdot 10^{-5}$	1600	0.311	3100	$1.9 \cdot 10^{-2}$	4600	$1.3 \cdot 10^{-3}$
390	0.910	690	$1.7 \cdot 10^{-2}$	990	$2.6 \cdot 10^{-5}$	1650	0.391	3150	$1.4 \cdot 10^{-2}$	4650	$1.1 \cdot 10^{-3}$
400	0.924	700	$9.7 \cdot 10^{-3}$	1000	$3.3 \cdot 10^{-5}$	1700	0.467	3200	$1.1 \cdot 10^{-2}$	4700	$9.5 \cdot 10^{-4}$
410	0.935	710	$5.3 \cdot 10^{-3}$	1010	$4.1 \cdot 10^{-5}$	1750	0.538	3250	$9.2 \cdot 10^{-3}$	4750	$7.7 \cdot 10^{-4}$
420	0.945	720	$2.9 \cdot 10^{-3}$	1020	$5.2 \cdot 10^{-5}$	1800	0.601	3300	$7.5 \cdot 10^{-3}$	4800	$6.4 \cdot 10^{-4}$
430	0.954	730	$1.6 \cdot 10^{-3}$	1030	$6.6 \cdot 10^{-5}$	1850	0.656	3350	$6.8 \cdot 10^{-3}$	4850	$5.7 \cdot 10^{-4}$
440	0.961	740	$8.7 \cdot 10^{-4}$	1040	$8.5 \cdot 10^{-5}$	1900	0.702	3400	$6.4 \cdot 10^{-3}$	4900	$5.7 \cdot 10^{-4}$
450	0.967	750	$4.7 \cdot 10^{-4}$	1050	$1.1 \cdot 10^{-4}$	1950	0.740	3450	$6.6 \cdot 10^{-3}$	4950	$6.4 \cdot 10^{-4}$
460	0.972	760	$2.7 \cdot 10^{-4}$	1060	$1.4 \cdot 10^{-4}$	2000	0.770	3500	$6.9 \cdot 10^{-3}$	5000	$7.5 \cdot 10^{-4}$
470	0.976	770	$1.5 \cdot 10^{-4}$	1070	$1.7 \cdot 10^{-4}$	2050	0.793	3550	$8.0 \cdot 10^{-3}$	5050	$8.5 \cdot 10^{-4}$
480	0.980	780	$9.1 \cdot 10^{-5}$	1080	$2.2 \cdot 10^{-4}$	2100	0.811	3600	$8.9 \cdot 10^{-3}$	5100	$8.5 \cdot 10^{-4}$
490	0.981	790	$5.6 \cdot 10^{-5}$	1090	$2.8 \cdot 10^{-4}$	2150	0.825	3650	$1.0 \cdot 10^{-2}$	5150	$6.3 \cdot 10^{-4}$