

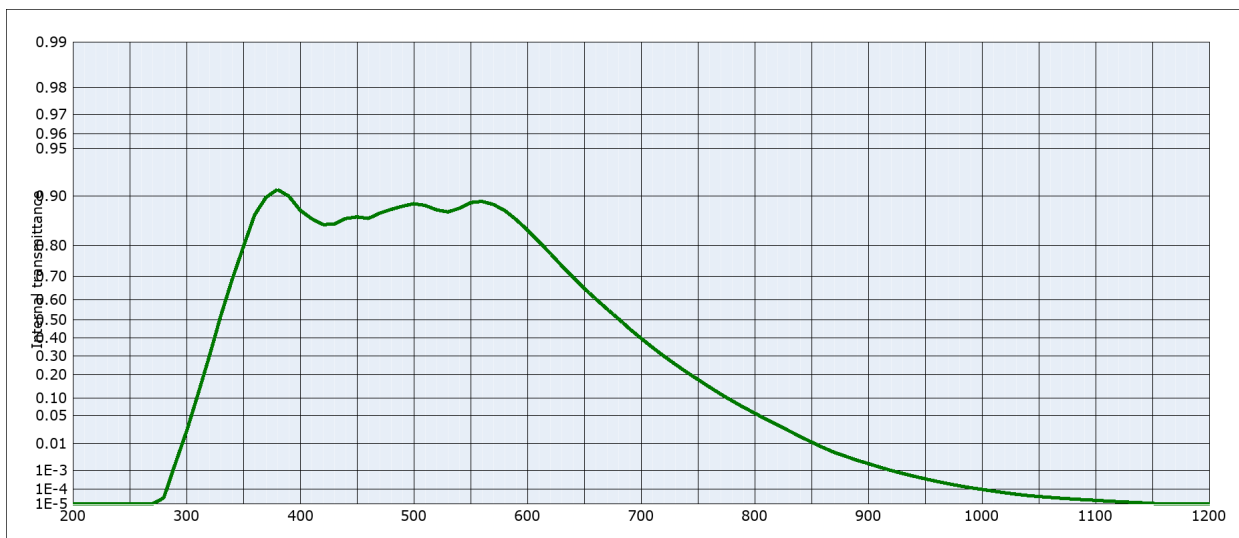


DATA SHEET

Heat Absorbing Filters SCHOTT KG5

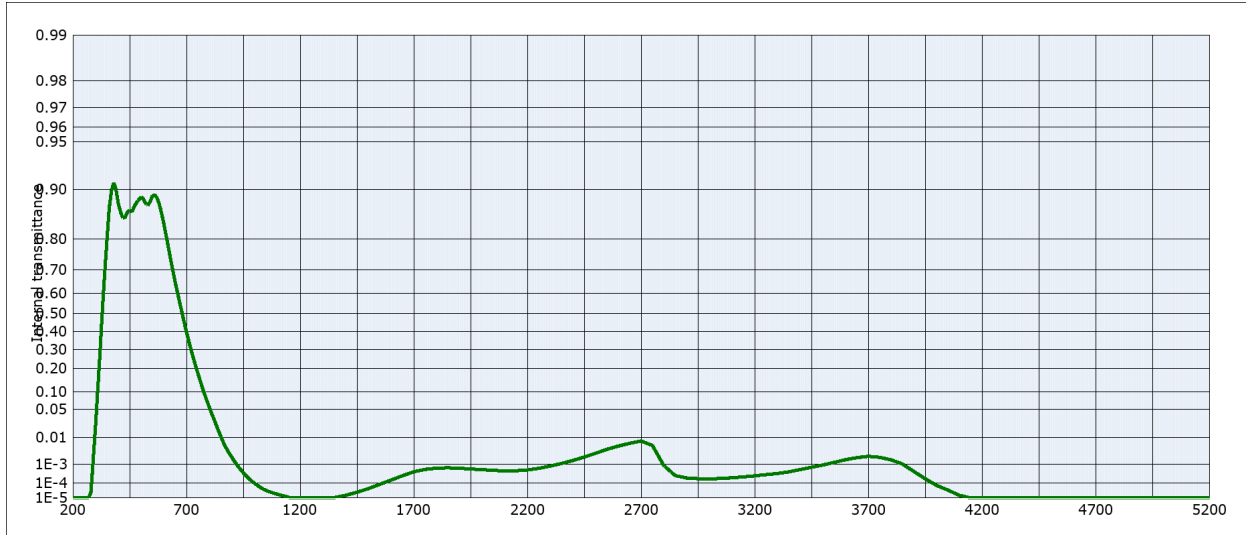
KG5		Density		Notes	
		ρ [g/cm ³]	2.53	Ionically colored glass	
Reflection factor		Bubble content		Shortpass filter	
P_d	0.920	Bubble class	3	Heat protection filter	
Reference thickness		Chemical Resistance			
d [mm]	2	FR class	0		
		SR class	3.0		
		AR class	4.0		
Spectral values guaranteed		Transformation temperature			
τ_i (365nm)	≥ 0.8	T_g [°C]	565	 Long-term changes of the polished surface are possible under some circumstances.	
τ_i (500nm)	≥ 0.86	Thermal expansion		 Transmission changes are possible under the action of intense ultraviolet radiation.	
τ_i (600nm)	≥ 0.8	$\alpha_{-30/+70^\circ\text{C}}$ [10 ⁻⁶ /K]	5.4		
τ_i (700nm)	≤ 0.43	$\alpha_{20/300^\circ\text{C}}$ [10 ⁻⁶ /K]	6.2		
τ_i (800nm)	≤ 0.09	$\alpha_{20/200^\circ\text{C}}$ [10 ⁻⁶ /K]			
τ_i (900nm)	≤ 0.008	Temperature coefficient			
τ_i (1060nm)	≤ 0.0001	T_K [nm/°C]		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".	
τ_i (2200nm)	≤ 0.001				
Refractive Index n					
n_i (365.0 nm) = 1.530					
n_d (587.6 nm) = 1.510					

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	0.440	0.434	0.427	x	0.416	0.410	0.404	x	0.308	0.304	0.300
y	0.411	0.415	0.418	y	0.402	0.406	0.409	y	0.331	0.332	0.334
Y	85	78	72	Y	85	78	72	Y	85	79	74
λ_d [nm]	504	505	505	λ_d [nm]	503	503	503	λ_d [nm]	496	496	496
P_e	0.02	0.03	0.05	P_e	0.02	0.03	0.05	P_e	0.02	0.03	0.04



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Internal transmittance τ_i at reference thickness $d = 2 \text{ mm}$ 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	0.888	800	$5.6 \cdot 10^{-2}$	1100	$1.9 \cdot 10^{-5}$	2200	$5.4 \cdot 10^{-4}$	3700	$2.2 \cdot 10^{-3}$
210	$< 10^{-5}$	510	0.885	810	$4.2 \cdot 10^{-2}$	1110	$1.7 \cdot 10^{-5}$	2250	$6.5 \cdot 10^{-4}$	3750	$2.0 \cdot 10^{-3}$
220	$< 10^{-5}$	520	0.878	820	$3.2 \cdot 10^{-2}$	1120	$1.5 \cdot 10^{-5}$	2300	$8.3 \cdot 10^{-4}$	3800	$1.6 \cdot 10^{-3}$
230	$< 10^{-5}$	530	0.874	830	$2.3 \cdot 10^{-2}$	1130	$1.4 \cdot 10^{-5}$	2350	$1.1 \cdot 10^{-3}$	3850	$1.0 \cdot 10^{-3}$
240	$< 10^{-5}$	540	0.881	840	$1.6 \cdot 10^{-2}$	1140	$1.2 \cdot 10^{-5}$	2400	$1.5 \cdot 10^{-3}$	3900	$4.6 \cdot 10^{-4}$
250	$< 10^{-5}$	550	0.890	850	$1.1 \cdot 10^{-2}$	1150	$1.1 \cdot 10^{-5}$	2450	$2.1 \cdot 10^{-3}$	3950	$1.9 \cdot 10^{-4}$
260	$< 10^{-5}$	560	0.892	860	$7.7 \cdot 10^{-3}$	1160	$1.0 \cdot 10^{-5}$	2500	$2.9 \cdot 10^{-3}$	4000	$7.4 \cdot 10^{-5}$
270	$< 10^{-5}$	570	0.887	870	$5.3 \cdot 10^{-3}$	1170	$< 10^{-5}$	2550	$4.1 \cdot 10^{-3}$	4050	$3.6 \cdot 10^{-5}$
280	$2.8 \cdot 10^{-5}$	580	0.877	880	$3.8 \cdot 10^{-3}$	1180	$< 10^{-5}$	2600	$5.3 \cdot 10^{-3}$	4100	$1.6 \cdot 10^{-5}$
290	$1.9 \cdot 10^{-3}$	590	0.860	890	$2.7 \cdot 10^{-3}$	1190	$< 10^{-5}$	2650	$6.6 \cdot 10^{-3}$	4150	$< 10^{-5}$
300	$2.2 \cdot 10^{-2}$	600	0.838	900	$2.0 \cdot 10^{-3}$	1200	$< 10^{-5}$	2700	$7.9 \cdot 10^{-3}$	4200	$< 10^{-5}$
310	0.114	610	0.810	910	$1.4 \cdot 10^{-3}$	1250	$< 10^{-5}$	2750	$5.6 \cdot 10^{-3}$	4250	$< 10^{-5}$
320	0.295	620	0.777	920	$1.0 \cdot 10^{-3}$	1300	$< 10^{-5}$	2800	$8.9 \cdot 10^{-4}$	4300	$< 10^{-5}$
330	0.516	630	0.738	930	$7.3 \cdot 10^{-4}$	1350	$1.0 \cdot 10^{-5}$	2850	$2.8 \cdot 10^{-4}$	4350	$< 10^{-5}$
340	0.684	640	0.696	940	$5.3 \cdot 10^{-4}$	1400	$1.5 \cdot 10^{-5}$	2900	$2.0 \cdot 10^{-4}$	4400	$< 10^{-5}$
350	0.795	650	0.650	950	$3.9 \cdot 10^{-4}$	1450	$2.6 \cdot 10^{-5}$	2950	$1.9 \cdot 10^{-4}$	4450	$< 10^{-5}$
360	0.869	660	0.604	960	$2.9 \cdot 10^{-4}$	1500	$4.5 \cdot 10^{-5}$	3000	$1.8 \cdot 10^{-4}$	4500	$< 10^{-5}$
370	0.898	670	0.555	970	$2.2 \cdot 10^{-4}$	1550	$8.5 \cdot 10^{-5}$	3050	$1.9 \cdot 10^{-4}$	4550	$< 10^{-5}$
380	0.909	680	0.505	980	$1.6 \cdot 10^{-4}$	1600	$1.5 \cdot 10^{-4}$	3100	$2.1 \cdot 10^{-4}$	4600	$< 10^{-5}$
390	0.900	690	0.450	990	$1.3 \cdot 10^{-4}$	1650	$2.7 \cdot 10^{-4}$	3150	$2.3 \cdot 10^{-4}$	4650	$< 10^{-5}$
400	0.877	700	0.398	1000	$9.9 \cdot 10^{-5}$	1700	$4.4 \cdot 10^{-4}$	3200	$2.7 \cdot 10^{-4}$	4700	$< 10^{-5}$
410	0.862	710	0.347	1010	$7.8 \cdot 10^{-5}$	1750	$5.8 \cdot 10^{-4}$	3250	$3.1 \cdot 10^{-4}$	4750	$< 10^{-5}$
420	0.850	720	0.299	1020	$6.2 \cdot 10^{-5}$	1800	$6.6 \cdot 10^{-4}$	3300	$3.6 \cdot 10^{-4}$	4800	$< 10^{-5}$
430	0.851	730	0.255	1030	$4.9 \cdot 10^{-5}$	1850	$6.9 \cdot 10^{-4}$	3350	$4.3 \cdot 10^{-4}$	4850	$< 10^{-5}$
440	0.862	740	0.214	1040	$4.1 \cdot 10^{-5}$	1900	$6.5 \cdot 10^{-4}$	3400	$5.6 \cdot 10^{-4}$	4900	$< 10^{-5}$
450	0.865	750	0.178	1050	$3.5 \cdot 10^{-5}$	1950	$6.0 \cdot 10^{-4}$	3450	$7.3 \cdot 10^{-4}$	4950	$< 10^{-5}$
460	0.862	760	0.145	1060	$3.0 \cdot 10^{-5}$	2000	$5.6 \cdot 10^{-4}$	3500	$9.3 \cdot 10^{-4}$	5000	$< 10^{-5}$
470	0.872	770	0.116	1070	$2.6 \cdot 10^{-5}$	2050	$5.1 \cdot 10^{-4}$	3550	$1.2 \cdot 10^{-3}$	5050	$< 10^{-5}$
480	0.879	780	$9.2 \cdot 10^{-2}$	1080	$2.3 \cdot 10^{-5}$	2100	$4.9 \cdot 10^{-4}$	3600	$1.6 \cdot 10^{-3}$	5100	$< 10^{-5}$
490	0.884	790	$7.2 \cdot 10^{-2}$	1090	$2.1 \cdot 10^{-5}$	2150	$4.9 \cdot 10^{-4}$	3650	$1.9 \cdot 10^{-3}$	5150	$< 10^{-5}$