Data Sheet

SCHOTT

BG62

Density	
ρ [g/cm^3]	2.85

Reflection factor	
P_d	0.915

Bubble content	
Bubble class	2

Reference thickness	
d [mm]	1

Chemical Resistance	
FR class	1.0
SR class	52.3
AR class	3.3

Spectral values guaranteed		
τ_i (405nm)	≥	0.73
τ_i (514nm)	≥	0.89
τ_i (633nm)	≥	0.08
τ_i (694nm)	≤	0.005
τ_i (1060nm)	≤	0.0005

Transformation temperature	
Tg [°C]	410

Thermal expansion	
$\alpha_{-30/+70°C}$ [10^{-6}/K]	11.9
$\alpha_{20/300°C}$ [10^{-6}/K]	13.6
$\alpha_{20/200°C}$ [10^{-6}/K]	

Refractive Index n
n_i (365.0 nm) = 1.561
n_h (404.7 nm) = 1.554
n_g (435.8 nm) = 1.550
$n_{F'}$ (480.0 nm) = 1.546
Sellmeier coefficients on request

Temperature coefficient	
T_K [nm/°C]	

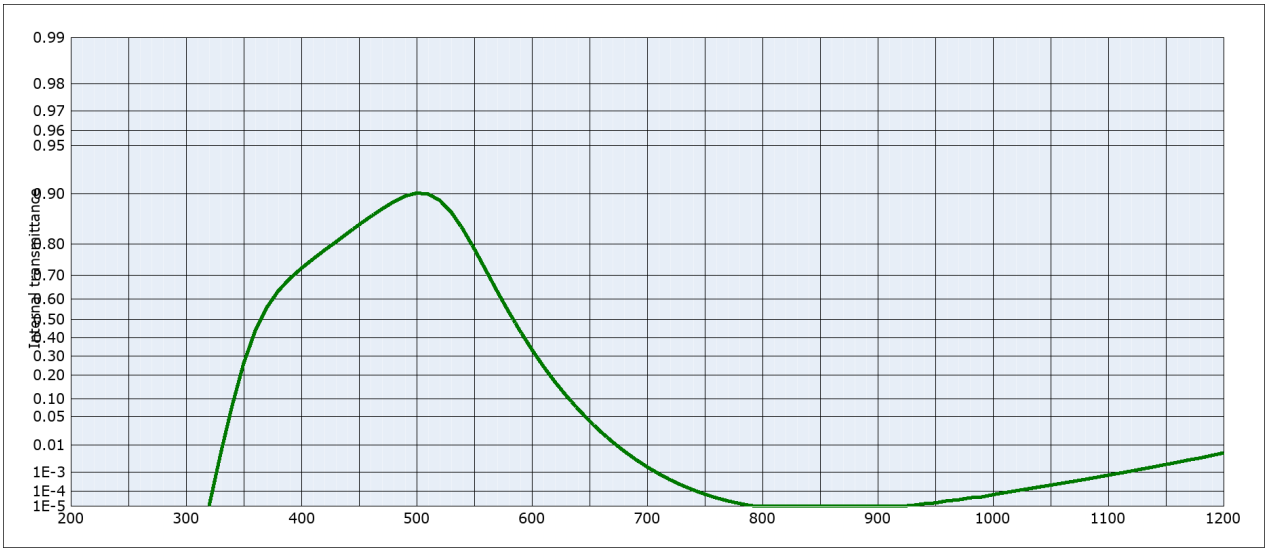
Notes
Ionically colored glass
Bandpass filter / shortpass filter
Color compensating filter / IR cut filter
lambda_50%(thickness=0.21mm) = 644 nm
Long-term changes of the polished
surface are possible under some
circumstances.
no visible surface damage after 500 h
of humidity test 85 °C / 85 % rh
Knoop hardness HK (0.1/20) = 368
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	0.321	0.257	0.220
y	0.441	0.447	0.445
Y	52	36	27
λ_d [nm]	499	498	498
P_e	0.29	0.44	0.52

Illuminant	Planck T = 3200 K		
d [mm]	1	2	3
x	0.302	0.243	0.210
y	0.422	0.423	0.419
Y	53	38	29
λ_d [nm]	498	497	496
P_e	0.30	0.44	0.53

Illuminant	D65 (T_C = 6504 K)		
d [mm]	1	2	3
x	0.229	0.194	0.175
y	0.320	0.311	0.305
Y	60	45	36
λ_d [nm]	490	490	489
P_e	0.31	0.45	0.52



Further explanations see 'Optical Filters 2013' catalogue

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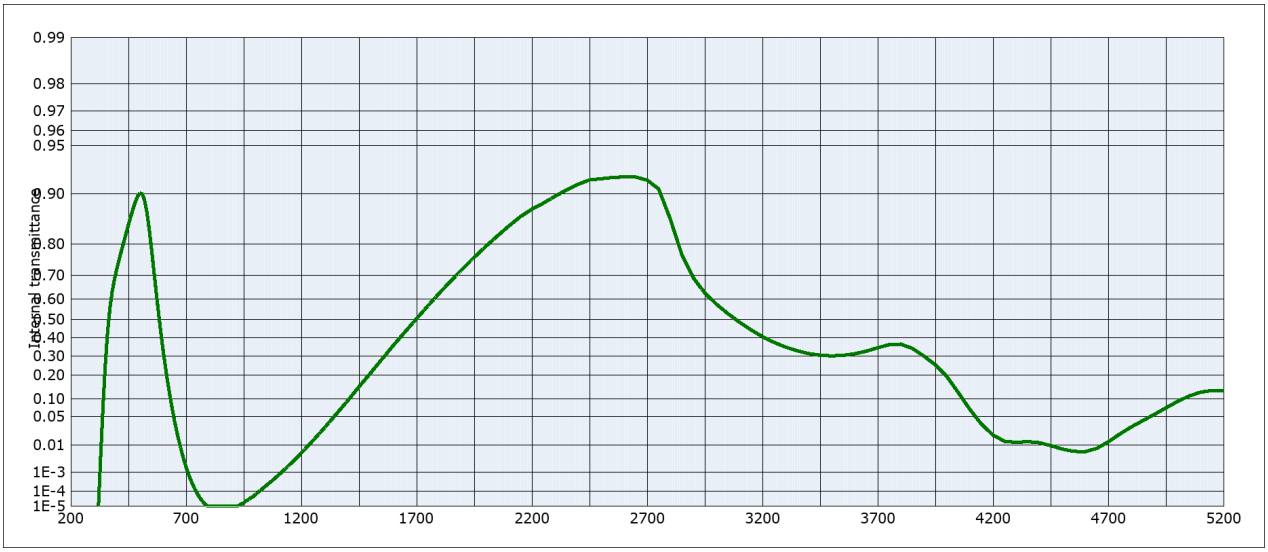

Internal transmittance τ_i at reference thickness d = 1 mm
The internal transmittance values, tabulated and graphically represented, are reference values only

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	0.901	800	$< 10^{-5}$	1100	$7.4 \cdot 10^{-4}$	2200	0.876	3700	0.345
210	$< 10^{-5}$	510	0.900	810	$< 10^{-5}$	1110	$9.1 \cdot 10^{-4}$	2250	0.886	3750	0.362
220	$< 10^{-5}$	520	0.890	820	$< 10^{-5}$	1120	$1.1 \cdot 10^{-3}$	2300	0.896	3800	0.365
230	$< 10^{-5}$	530	0.870	830	$< 10^{-5}$	1130	$1.4 \cdot 10^{-3}$	2350	0.905	3850	0.342
240	$< 10^{-5}$	540	0.836	840	$< 10^{-5}$	1140	$1.7 \cdot 10^{-3}$	2400	0.913	3900	0.300
250	$< 10^{-5}$	550	0.786	850	$< 10^{-5}$	1150	$2.1 \cdot 10^{-3}$	2450	0.918	3950	0.252
260	$< 10^{-5}$	560	0.718	860	$< 10^{-5}$	1160	$2.6 \cdot 10^{-3}$	2500	0.919	4000	0.194
270	$< 10^{-5}$	570	0.633	870	$< 10^{-5}$	1170	$3.2 \cdot 10^{-3}$	2550	0.921	4050	0.123
280	$< 10^{-5}$	580	0.536	880	$< 10^{-5}$	1180	$3.8 \cdot 10^{-3}$	2600	0.921	4100	$6.8 \cdot 10^{-2}$
290	$< 10^{-5}$	590	0.435	890	$< 10^{-5}$	1190	$4.7 \cdot 10^{-3}$	2650	0.921	4150	$3.5 \cdot 10^{-2}$
300	$< 10^{-5}$	600	0.335	900	$< 10^{-5}$	1200	$5.7 \cdot 10^{-3}$	2700	0.918	4200	$1.9 \cdot 10^{-2}$
310	$< 10^{-5}$	610	0.245	910	$< 10^{-5}$	1250	$1.4 \cdot 10^{-2}$	2750	0.907	4250	$1.3 \cdot 10^{-2}$
320	$1.1 \cdot 10^{-5}$	620	0.169	920	$< 10^{-5}$	1300	$2.9 \cdot 10^{-2}$	2800	0.858	4300	$1.2 \cdot 10^{-2}$
330	$5.4 \cdot 10^{-3}$	630	0.112	930	$1.2 \cdot 10^{-5}$	1350	$5.5 \cdot 10^{-2}$	2850	0.770	4350	$1.3 \cdot 10^{-2}$
340	$8.0 \cdot 10^{-2}$	640	$6.9 \cdot 10^{-2}$	940	$1.5 \cdot 10^{-5}$	1400	$9.4 \cdot 10^{-2}$	2900	0.689	4400	$1.2 \cdot 10^{-2}$
350	0.261	650	$4.1 \cdot 10^{-2}$	950	$1.8 \cdot 10^{-5}$	1450	0.147	2950	0.627	4450	$9.8 \cdot 10^{-3}$
360	0.438	660	$2.3 \cdot 10^{-2}$	960	$2.5 \cdot 10^{-5}$	1500	0.211	3000	0.575	4500	$7.6 \cdot 10^{-3}$
370	0.559	670	$1.3 \cdot 10^{-2}$	970	$2.9 \cdot 10^{-5}$	1550	0.283	3050	0.529	4550	$6.4 \cdot 10^{-3}$
380	0.636	680	$6.6 \cdot 10^{-3}$	980	$4.0 \cdot 10^{-5}$	1600	0.359	3100	0.485	4600	$6.3 \cdot 10^{-3}$
390	0.686	690	$3.4 \cdot 10^{-3}$	990	$4.5 \cdot 10^{-5}$	1650	0.433	3150	0.443	4650	$8.0 \cdot 10^{-3}$
400	0.724	700	$1.7 \cdot 10^{-3}$	1000	$6.3 \cdot 10^{-5}$	1700	0.503	3200	0.406	4700	$1.3 \cdot 10^{-2}$
410	0.755	710	$8.6 \cdot 10^{-4}$	1010	$8.5 \cdot 10^{-5}$	1750	0.569	3250	0.375	4750	$2.0 \cdot 10^{-2}$
420	0.782	720	$4.4 \cdot 10^{-4}$	1020	$1.1 \cdot 10^{-4}$	1800	0.627	3300	0.349	4800	$3.0 \cdot 10^{-2}$
430	0.805	730	$2.3 \cdot 10^{-4}$	1030	$1.4 \cdot 10^{-4}$	1850	0.678	3350	0.328	4850	$4.2 \cdot 10^{-2}$
440	0.826	740	$1.2 \cdot 10^{-4}$	1040	$1.8 \cdot 10^{-4}$	1900	0.722	3400	0.313	4900	$5.5 \cdot 10^{-2}$
450	0.846	750	$6.8 \cdot 10^{-5}$	1050	$2.3 \cdot 10^{-4}$	1950	0.760	3450	0.304	4950	$7.2 \cdot 10^{-2}$
460	0.862	760	$3.9 \cdot 10^{-5}$	1060	$2.9 \cdot 10^{-4}$	2000	0.793	3500	0.300	5000	$9.2 \cdot 10^{-2}$
470	0.876	770	$2.4 \cdot 10^{-5}$	1070	$3.7 \cdot 10^{-4}$	2050	0.820	3550	0.303	5050	0.111
480	0.888	780	$1.6 \cdot 10^{-5}$	1080	$4.6 \cdot 10^{-4}$	2100	0.843	3600	0.312	5100	0.125
490	0.897	790	$1.1 \cdot 10^{-5}$	1090	$5.8 \cdot 10^{-4}$	2150	0.862	3650	0.326	5150	0.132

Further explanations see 'Optical Filters 2013' catalogue