Data Sheet

SCHOTT

BG60

Reflection factor	
P_d	0.914

Reference thickness	
d [mm]	1

Spectral values guaranteed		
τ_i (405nm)	≥	0.8
τ_i (514nm)	≥	0.91
τ_i (633nm)	≥	0.1
τ_i (694nm)	≤	0.008
τ_i (1060nm)	≤	0.0015

Refractive Index n
n_i (365.0 nm) = 1.559
n_h (404.7 nm) = 1.552
n_e (546.1 nm) = 1.540
n_d (587.6 nm) = 1.538
Sellmeier coefficients on request

Density	
ρ [g/cm^3]	2.83

Bubble content	
Bubble class	2

Chemical Resistance	
FR class	1.0
SR class	52.3
AR class	3.3

Transformation temperature	
Tg [°C]	411

Thermal expansion	
$\alpha_{-30/+70°C}$ [10^{-6}/K]	12.0
$\alpha_{20/300°C}$ [10^{-6}/K]	13.9
$\alpha_{20/200°C}$ [10^{-6}/K]	

Temperature coefficient	
T_K [nm/°C]	

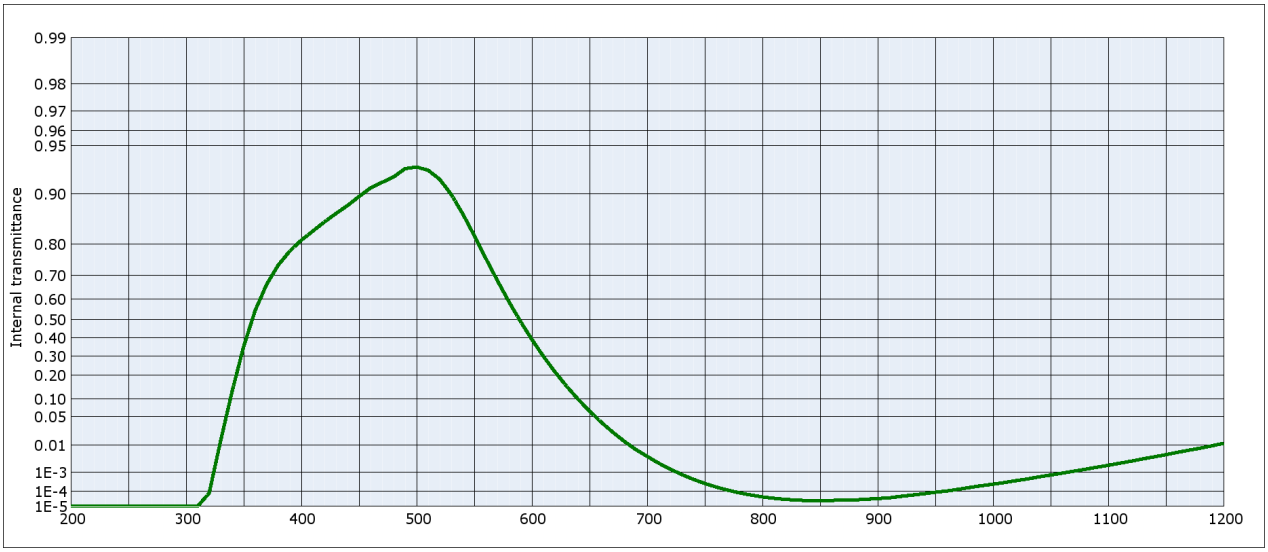
Notes
Ionically colored glass
Bandpass filter / shortpass filter
Color compensating filter / IR cut filter
lambda_50%(thickness=0.3mm) = 633 nm
Long-term changes in the polished
surface are possible under some
circumstances.
no visible surface damage after 500 h
of humidity test 85 °C / 85 % rh
Knoop hardness HK (0.1/20) = 362
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	0.334	0.271	0.232
y	0.436	0.441	0.437
Y	56	40	32
λ_d [nm]	499	498	497
P_e	0.26	0.41	0.50

Illuminant	Planck T = 3200 K		
d [mm]	1	2	3
x	0.314	0.256	0.221
y	0.418	0.417	0.411
Y	57	42	33
λ_d [nm]	497	496	495
P_e	0.27	0.41	0.50

Illuminant	D65 (T_C = 6504 K)		
d [mm]	1	2	3
x	0.236	0.201	0.181
y	0.318	0.306	0.297
Y	64	50	41
λ_d [nm]	490	489	489
P_e	0.29	0.43	0.51



Further explanations see 'Optical Filters 2013' catalogue

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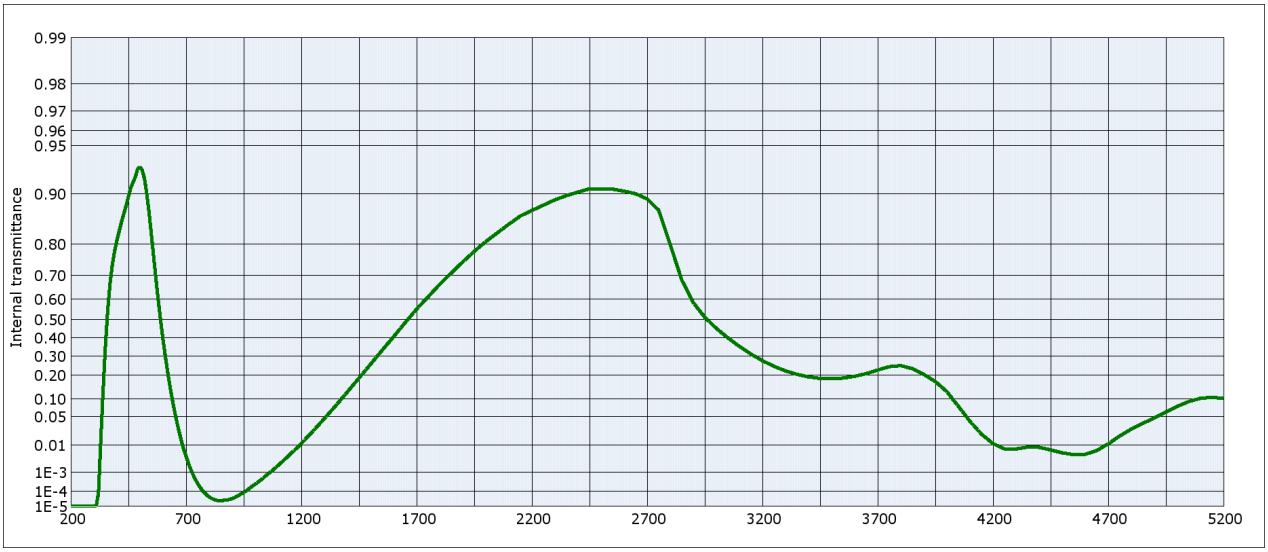

Internal transmittance τ_i at reference thickness d = 1 mm
The internal transmittance values, tabulated and graphically represented, are reference values only

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	0.932	800	$4.6 \cdot 10^{-5}$	1100	$2.0 \cdot 10^{-3}$	2200	0.873	3700	0.226
210	$< 10^{-5}$	510	0.929	810	$3.7 \cdot 10^{-5}$	1110	$2.4 \cdot 10^{-3}$	2250	0.882	3750	0.243
220	$< 10^{-5}$	520	0.919	820	$3.1 \cdot 10^{-5}$	1120	$2.9 \cdot 10^{-3}$	2300	0.891	3800	0.248
230	$< 10^{-5}$	530	0.899	830	$2.8 \cdot 10^{-5}$	1130	$3.5 \cdot 10^{-3}$	2350	0.897	3850	0.233
240	$< 10^{-5}$	540	0.867	840	$2.6 \cdot 10^{-5}$	1140	$4.2 \cdot 10^{-3}$	2400	0.902	3900	0.204
250	$< 10^{-5}$	550	0.821	850	$2.5 \cdot 10^{-5}$	1150	$5.0 \cdot 10^{-3}$	2450	0.907	3950	0.171
260	$< 10^{-5}$	560	0.757	860	$2.6 \cdot 10^{-5}$	1160	$6.0 \cdot 10^{-3}$	2500	0.906	4000	0.128
270	$< 10^{-5}$	570	0.679	870	$2.9 \cdot 10^{-5}$	1170	$7.0 \cdot 10^{-3}$	2550	0.906	4050	$7.7 \cdot 10^{-2}$
280	$< 10^{-5}$	580	0.587	880	$2.9 \cdot 10^{-5}$	1180	$8.2 \cdot 10^{-3}$	2600	0.904	4100	$4.0 \cdot 10^{-2}$
290	$< 10^{-5}$	590	0.489	890	$3.2 \cdot 10^{-5}$	1190	$9.7 \cdot 10^{-3}$	2650	0.900	4150	$2.0 \cdot 10^{-2}$
300	$< 10^{-5}$	600	0.390	900	$3.6 \cdot 10^{-5}$	1200	$1.1 \cdot 10^{-2}$	2700	0.892	4200	$1.1 \cdot 10^{-2}$
310	$< 10^{-5}$	610	0.298	910	$4.0 \cdot 10^{-5}$	1250	$2.4 \cdot 10^{-2}$	2750	0.874	4250	$7.7 \cdot 10^{-3}$
320	$7.8 \cdot 10^{-5}$	620	0.217	920	$4.9 \cdot 10^{-5}$	1300	$4.6 \cdot 10^{-2}$	2800	0.798	4300	$7.7 \cdot 10^{-3}$
330	$1.4 \cdot 10^{-2}$	630	0.151	930	$6.0 \cdot 10^{-5}$	1350	$8.0 \cdot 10^{-2}$	2850	0.680	4350	$8.8 \cdot 10^{-3}$
340	0.130	640	0.100	940	$7.2 \cdot 10^{-5}$	1400	0.127	2900	0.583	4400	$8.6 \cdot 10^{-3}$
350	0.352	650	$6.4 \cdot 10^{-2}$	950	$9.0 \cdot 10^{-5}$	1450	0.187	2950	0.510	4450	$7.2 \cdot 10^{-3}$
360	0.545	660	$3.9 \cdot 10^{-2}$	960	$1.1 \cdot 10^{-4}$	1500	0.256	3000	0.451	4500	$5.8 \cdot 10^{-3}$
370	0.664	670	$2.3 \cdot 10^{-2}$	970	$1.3 \cdot 10^{-4}$	1550	0.330	3050	0.400	4550	$5.0 \cdot 10^{-3}$
380	0.736	680	$1.3 \cdot 10^{-2}$	980	$1.7 \cdot 10^{-4}$	1600	0.406	3100	0.352	4600	$5.1 \cdot 10^{-3}$
390	0.779	690	$7.4 \cdot 10^{-3}$	990	$2.1 \cdot 10^{-4}$	1650	0.481	3150	0.310	4650	$6.8 \cdot 10^{-3}$
400	0.809	700	$4.3 \cdot 10^{-3}$	1000	$2.6 \cdot 10^{-4}$	1700	0.551	3200	0.274	4700	$1.1 \cdot 10^{-2}$
410	0.831	710	$2.4 \cdot 10^{-3}$	1010	$3.2 \cdot 10^{-4}$	1750	0.609	3250	0.245	4750	$1.8 \cdot 10^{-2}$
420	0.851	720	$1.4 \cdot 10^{-3}$	1020	$4.0 \cdot 10^{-4}$	1800	0.663	3300	0.222	4800	$2.7 \cdot 10^{-2}$
430	0.868	730	$7.9 \cdot 10^{-4}$	1030	$4.8 \cdot 10^{-4}$	1850	0.707	3350	0.204	4850	$3.6 \cdot 10^{-2}$
440	0.882	740	$4.6 \cdot 10^{-4}$	1040	$6.1 \cdot 10^{-4}$	1900	0.746	3400	0.192	4900	$4.7 \cdot 10^{-2}$
450	0.896	750	$2.8 \cdot 10^{-4}$	1050	$7.5 \cdot 10^{-4}$	1950	0.779	3450	0.185	4950	$6.1 \cdot 10^{-2}$
460	0.908	760	$1.8 \cdot 10^{-4}$	1060	$9.2 \cdot 10^{-4}$	2000	0.806	3500	0.183	5000	$7.7 \cdot 10^{-2}$
470	0.915	770	$1.2 \cdot 10^{-4}$	1070	$1.1 \cdot 10^{-3}$	2050	0.827	3550	0.187	5050	$9.2 \cdot 10^{-2}$
480	0.921	780	$8.2 \cdot 10^{-5}$	1080	$1.4 \cdot 10^{-3}$	2100	0.847	3600	0.195	5100	0.103
490	0.930	790	$6.0 \cdot 10^{-5}$	1090	$1.7 \cdot 10^{-3}$	2150	0.863	3650	0.208	5150	0.107

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