Data Sheet

SCHOTT

BG60HT

Reflection factor	
P_d	0.914

Reference thickness	
d [mm]	1

Spectral values guaranteed		
τ_i (405nm)	≥	0.85
τ_i (514nm)	≥	0.93
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_g (435.8 nm) = 1.548
$n_{F'}$ (480.0 nm) = 1.544
Sellmeier coefficients on request

Density	
ρ [g/cm^3]	2.83

Bubble content	
Bubble class	2

Chemical Resistance	
FR class	1.0
SR class	52.2
AR class	3.2

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]	

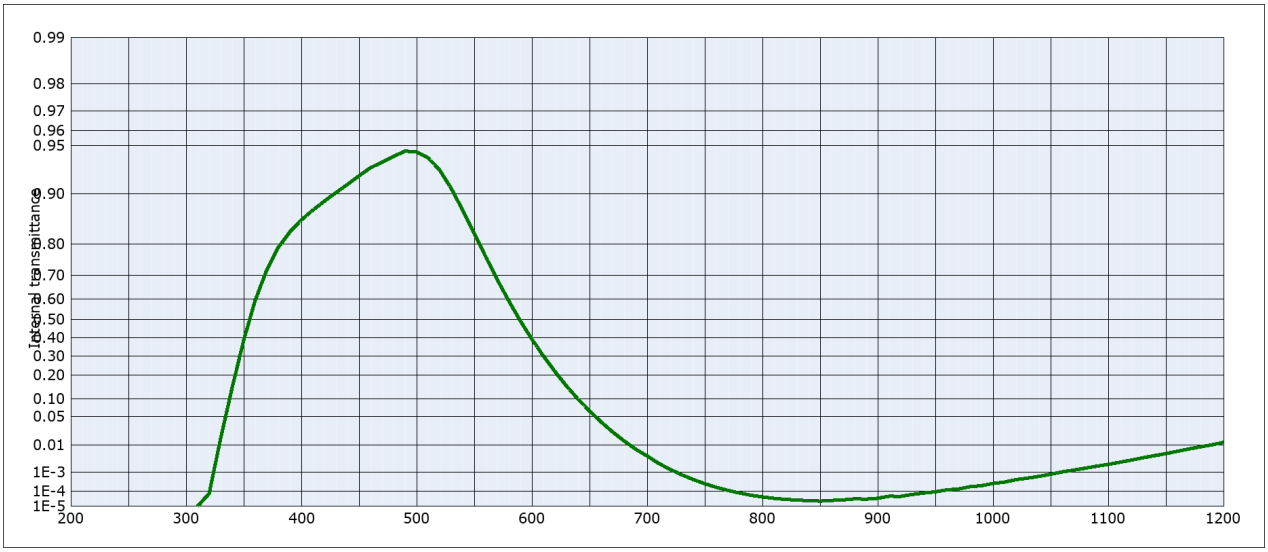
Notes
Ionically colored glass
Bandpass filter / shortpass filter
Color compensating filter / IR cut filter
lambda_50%(thickness=0.3mm) = 633 nm
Long-term changes of the polished
surface are possible under some
circumstances.
no visible surface damage after 500 h
of humidity test 85 °C / 85 % rh
Knoop hardness HK (0.1/20) = 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	0.330	0.266	0.227
y	0.435	0.436	0.429
Y	56	41	32
λ_d [nm]	499	498	496
P_e	0.27	0.42	0.51

Illuminant	Planck T = 3200 K		
d [mm]	1	2	3
x	0.310	0.251	0.216
y	0.416	0.412	0.403
Y	57	43	34
λ_d [nm]	497	496	495
P_e	0.28	0.43	0.52

Illuminant	D65 (T_C = 6504 K)		
d [mm]	1	2	3
x	0.233	0.198	0.178
y	0.315	0.300	0.287
Y	64	51	42
λ_d [nm]	489	488	488
P_e	0.30	0.44	0.52



Further explanations see 'Optical Filters 2013' catalogue

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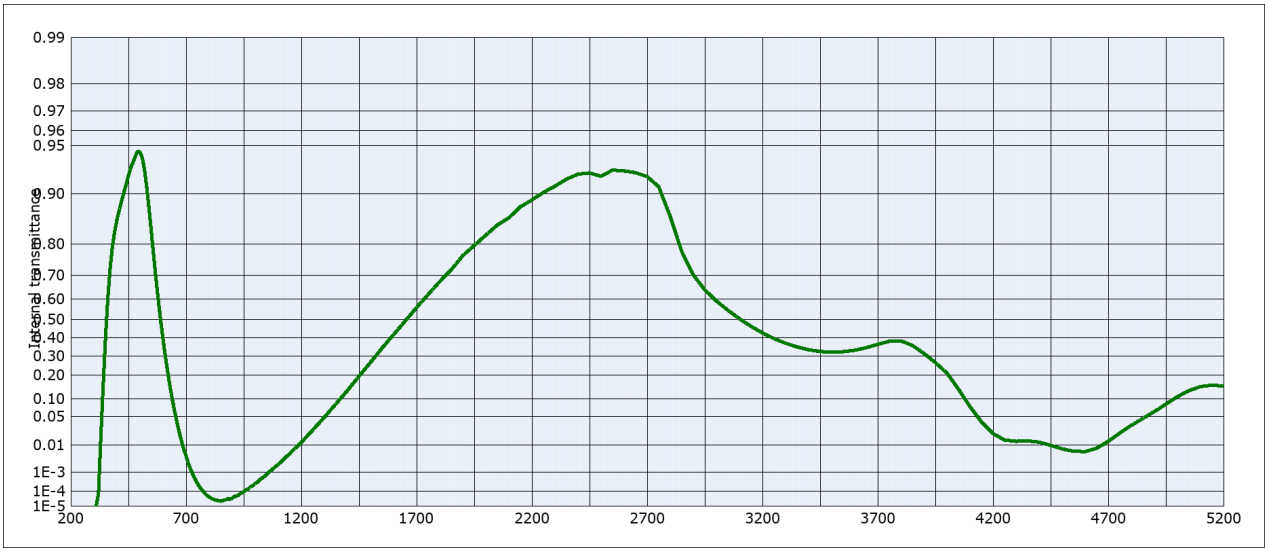

Internal transmittance τ_i at reference thickness d = 1 mm
The internal transmittance values, tabulated and graphically represented, are reference values only

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	0.945	800	$4.5 \cdot 10^{-5}$	1100	$2.2 \cdot 10^{-3}$	2200	0.891	3700	0.363
210	$< 10^{-5}$	510	0.940	810	$3.7 \cdot 10^{-5}$	1110	$2.6 \cdot 10^{-3}$	2250	0.902	3750	0.380
220	$< 10^{-5}$	520	0.929	820	$3.1 \cdot 10^{-5}$	1120	$3.2 \cdot 10^{-3}$	2300	0.910	3800	0.383
230	$< 10^{-5}$	530	0.907	830	$2.8 \cdot 10^{-5}$	1130	$3.9 \cdot 10^{-3}$	2350	0.919	3850	0.358
240	$< 10^{-5}$	540	0.874	840	$2.6 \cdot 10^{-5}$	1140	$4.6 \cdot 10^{-3}$	2400	0.925	3900	0.314
250	$< 10^{-5}$	550	0.826	850	$2.4 \cdot 10^{-5}$	1150	$5.4 \cdot 10^{-3}$	2450	0.926	3950	0.265
260	$< 10^{-5}$	560	0.762	860	$2.6 \cdot 10^{-5}$	1160	$6.5 \cdot 10^{-3}$	2500	0.922	4000	0.211
270	$< 10^{-5}$	570	0.682	870	$2.9 \cdot 10^{-5}$	1170	$7.7 \cdot 10^{-3}$	2550	0.929	4050	0.138
280	$< 10^{-5}$	580	0.590	880	$3.4 \cdot 10^{-5}$	1180	$9.0 \cdot 10^{-3}$	2600	0.928	4100	$7.6 \cdot 10^{-2}$
290	$< 10^{-5}$	590	0.491	890	$3.2 \cdot 10^{-5}$	1190	$1.0 \cdot 10^{-2}$	2650	0.926	4150	$3.9 \cdot 10^{-2}$
300	$< 10^{-5}$	600	0.392	900	$3.7 \cdot 10^{-5}$	1200	$1.2 \cdot 10^{-2}$	2700	0.922	4200	$2.1 \cdot 10^{-2}$
310	$< 10^{-5}$	610	0.299	910	$5.0 \cdot 10^{-5}$	1250	$2.6 \cdot 10^{-2}$	2750	0.910	4250	$1.4 \cdot 10^{-2}$
320	$7.4 \cdot 10^{-5}$	620	0.218	920	$5.0 \cdot 10^{-5}$	1300	$4.9 \cdot 10^{-2}$	2800	0.862	4300	$1.3 \cdot 10^{-2}$
330	$1.6 \cdot 10^{-2}$	630	0.151	930	$6.5 \cdot 10^{-5}$	1350	$8.4 \cdot 10^{-2}$	2850	0.778	4350	$1.3 \cdot 10^{-2}$
340	0.145	640	0.100	940	$8.1 \cdot 10^{-5}$	1400	0.132	2900	0.700	4400	$1.2 \cdot 10^{-2}$
350	0.387	650	$6.4 \cdot 10^{-2}$	950	$9.5 \cdot 10^{-5}$	1450	0.195	2950	0.640	4450	$1.0 \cdot 10^{-2}$
360	0.594	660	$3.9 \cdot 10^{-2}$	960	$1.2 \cdot 10^{-4}$	1500	0.266	3000	0.591	4500	$7.8 \cdot 10^{-3}$
370	0.718	670	$2.3 \cdot 10^{-2}$	970	$1.4 \cdot 10^{-4}$	1550	0.343	3050	0.545	4550	$6.5 \cdot 10^{-3}$
380	0.790	680	$1.3 \cdot 10^{-2}$	980	$1.9 \cdot 10^{-4}$	1600	0.418	3100	0.503	4600	$6.3 \cdot 10^{-3}$
390	0.830	690	$7.6 \cdot 10^{-3}$	990	$2.1 \cdot 10^{-4}$	1650	0.490	3150	0.463	4650	$8.1 \cdot 10^{-3}$
400	0.855	700	$4.5 \cdot 10^{-3}$	1000	$2.8 \cdot 10^{-4}$	1700	0.559	3200	0.427	4700	$1.3 \cdot 10^{-2}$
410	0.874	710	$2.4 \cdot 10^{-3}$	1010	$3.4 \cdot 10^{-4}$	1750	0.620	3250	0.396	4750	$2.2 \cdot 10^{-2}$
420	0.889	720	$1.3 \cdot 10^{-3}$	1020	$4.5 \cdot 10^{-4}$	1800	0.674	3300	0.370	4800	$3.3 \cdot 10^{-2}$
430	0.902	730	$7.7 \cdot 10^{-4}$	1030	$5.3 \cdot 10^{-4}$	1850	0.719	3350	0.350	4850	$4.6 \cdot 10^{-2}$
440	0.912	740	$4.5 \cdot 10^{-4}$	1040	$6.5 \cdot 10^{-4}$	1900	0.766	3400	0.334	4900	$6.2 \cdot 10^{-2}$
450	0.923	750	$2.7 \cdot 10^{-4}$	1050	$8.1 \cdot 10^{-4}$	1950	0.795	3450	0.324	4950	$8.4 \cdot 10^{-2}$
460	0.931	760	$1.7 \cdot 10^{-4}$	1060	$1.0 \cdot 10^{-3}$	2000	0.822	3500	0.320	5000	0.109
470	0.936	770	$1.2 \cdot 10^{-4}$	1070	$1.2 \cdot 10^{-3}$	2050	0.845	3550	0.323	5050	0.132
480	0.942	780	$8.0 \cdot 10^{-5}$	1080	$1.5 \cdot 10^{-3}$	2100	0.860	3600	0.331	5100	0.149
490	0.946	790	$5.9 \cdot 10^{-5}$	1090	$1.8 \cdot 10^{-3}$	2150	0.880	3650	0.345	5150	0.155

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