

Data Sheet



BG66HS

Reflection factor	
P_d	0.913

Reference thickness	
d [mm]	1

Spectral values guaranteed		
τ_i (405nm)	\geq	0.71
τ_i (514nm)	\geq	0.85
τ_i (633nm)	\geq	0.04
τ_i (694nm)	\leq	0.0025
τ_i (1060nm)	\leq	0.0004

Refractive Index n	
n_e (546.1 nm) = 1.544	
n_d (587.6 nm) = 1.542	
Sellmeier coefficients on request	

Density	
ρ [g/cm ³]	2.87


Bubble content	
Bubble class	2

Chemical Resistance	
FR class	0
SR class	52.3
AR class	0

Transformation temperature	
T _g [°C]	425

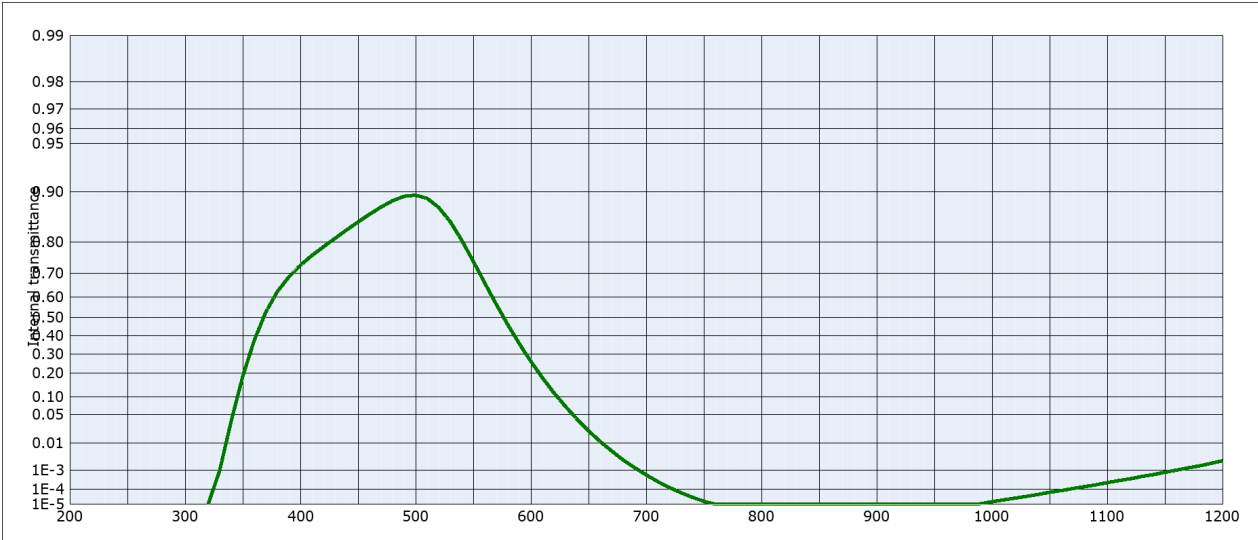
Thermal expansion	
$\alpha_{30/+70^\circ\text{C}}$ [10 ⁻⁶ /K]	11.5
$\alpha_{20/300^\circ\text{C}}$ [10 ⁻⁶ /K]	13.3
$\alpha_{20/200^\circ\text{C}}$ [10 ⁻⁶ /K]	

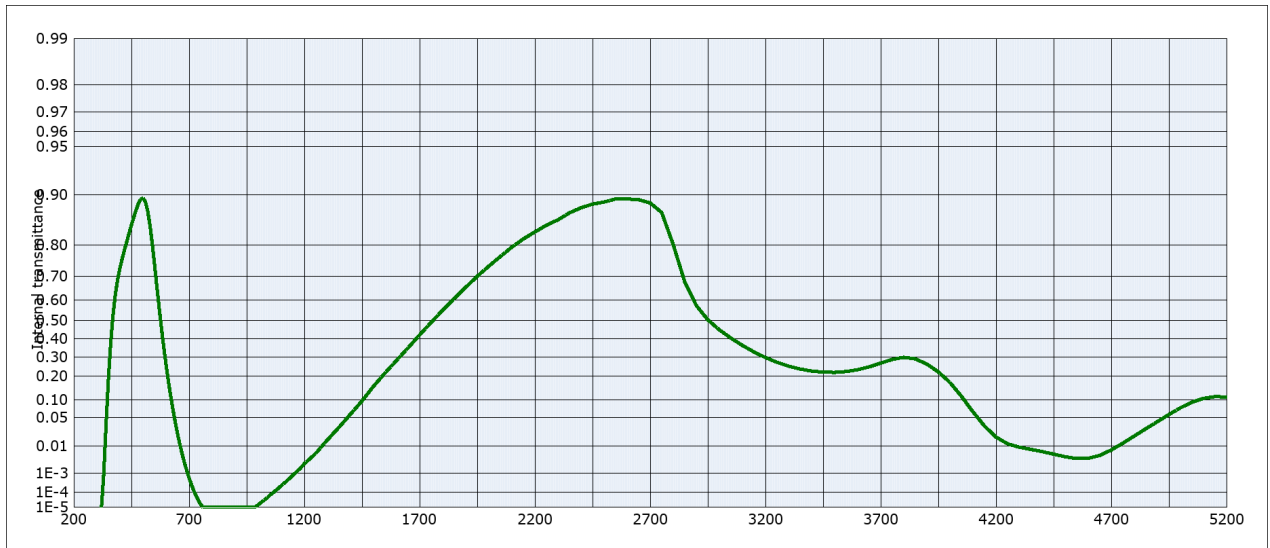
Temperature coefficient	
T _K [nm/°C]	

Notes	
Ionically colored glass	
Bandpass filter / shortpass filter	
Color compensating filter / IR cut filter	
$\lambda_{50\%}$ (thickness=0.21mm) = 634 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) = 385	
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)			Illuminant	Planck T = 3200 K			Illuminant	D65 (T _C = 6504 K)		
	d [mm]	1	2		3	d [mm]	1		2	3	d [mm]
x	0.300	0.234	0.198	x	0.283	0.222	0.190	x	0.217	0.182	0.164
y	0.440	0.438	0.430	y	0.419	0.413	0.403	y	0.313	0.298	0.288
Y	47	32	23	Y	49	33	25	Y	56	41	32
λ_d [nm]	499	497	496	λ_d [nm]	497	496	495	λ_d [nm]	489	489	488
P _e	0.34	0.49	0.58	P _e	0.35	0.50	0.59	P _e	0.36	0.50	0.58





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	0.895	800	$< 10^{-5}$	1100	$2.5 \cdot 10^{-4}$	2200	0.832	3700	0.267
210	$< 10^{-5}$	510	0.890	810	$< 10^{-5}$	1110	$3.1 \cdot 10^{-4}$	2250	0.847	3750	0.287
220	$< 10^{-5}$	520	0.875	820	$< 10^{-5}$	1120	$3.9 \cdot 10^{-4}$	2300	0.858	3800	0.298
230	$< 10^{-5}$	530	0.848	830	$< 10^{-5}$	1130	$5.1 \cdot 10^{-4}$	2350	0.871	3850	0.290
240	$< 10^{-5}$	540	0.804	840	$< 10^{-5}$	1140	$6.3 \cdot 10^{-4}$	2400	0.880	3900	0.262
250	$< 10^{-5}$	550	0.741	850	$< 10^{-5}$	1150	$8.1 \cdot 10^{-4}$	2450	0.886	3950	0.222
260	$< 10^{-5}$	560	0.660	860	$< 10^{-5}$	1160	$1.0 \cdot 10^{-3}$	2500	0.889	4000	0.171
270	$< 10^{-5}$	570	0.564	870	$< 10^{-5}$	1170	$1.3 \cdot 10^{-3}$	2550	0.894	4050	0.114
280	$< 10^{-5}$	580	0.460	880	$< 10^{-5}$	1180	$1.6 \cdot 10^{-3}$	2600	0.894	4100	$6.4 \cdot 10^{-2}$
290	$< 10^{-5}$	590	0.356	890	$< 10^{-5}$	1190	$2.0 \cdot 10^{-3}$	2650	0.893	4150	$3.3 \cdot 10^{-2}$
300	$< 10^{-5}$	600	0.260	900	$< 10^{-5}$	1200	$2.5 \cdot 10^{-3}$	2700	0.888	4200	$1.8 \cdot 10^{-2}$
310	$< 10^{-5}$	610	0.179	910	$< 10^{-5}$	1250	$6.0 \cdot 10^{-3}$	2750	0.871	4250	$1.2 \cdot 10^{-2}$
320	$< 10^{-5}$	620	0.115	920	$< 10^{-5}$	1300	$1.5 \cdot 10^{-2}$	2800	0.800	4300	$9.4 \cdot 10^{-3}$
330	$9.7 \cdot 10^{-4}$	630	$7.1 \cdot 10^{-2}$	930	$< 10^{-5}$	1350	$3.1 \cdot 10^{-2}$	2850	0.677	4350	$8.1 \cdot 10^{-3}$
340	$3.7 \cdot 10^{-2}$	640	$4.1 \cdot 10^{-2}$	940	$< 10^{-5}$	1400	$5.8 \cdot 10^{-2}$	2900	0.574	4400	$6.8 \cdot 10^{-3}$
350	0.185	650	$2.2 \cdot 10^{-2}$	950	$< 10^{-5}$	1450	$9.7 \cdot 10^{-2}$	2950	0.502	4450	$5.6 \cdot 10^{-3}$
360	0.375	660	$1.1 \cdot 10^{-2}$	960	$< 10^{-5}$	1500	0.154	3000	0.449	4500	$4.6 \cdot 10^{-3}$
370	0.526	670	$5.7 \cdot 10^{-3}$	970	$< 10^{-5}$	1550	0.216	3050	0.404	4550	$4.0 \cdot 10^{-3}$
380	0.623	680	$2.7 \cdot 10^{-3}$	980	$< 10^{-5}$	1600	0.282	3100	0.364	4600	$4.0 \cdot 10^{-3}$
390	0.685	690	$1.3 \cdot 10^{-3}$	990	$1.1 \cdot 10^{-5}$	1650	0.350	3150	0.328	4650	$5.1 \cdot 10^{-3}$
400	0.728	700	$6.1 \cdot 10^{-4}$	1000	$1.6 \cdot 10^{-5}$	1700	0.421	3200	0.297	4700	$7.7 \cdot 10^{-3}$
410	0.760	710	$2.8 \cdot 10^{-4}$	1010	$2.1 \cdot 10^{-5}$	1750	0.488	3250	0.271	4750	$1.2 \cdot 10^{-2}$
420	0.786	720	$1.3 \cdot 10^{-4}$	1020	$2.8 \cdot 10^{-5}$	1800	0.551	3300	0.251	4800	$1.9 \cdot 10^{-2}$
430	0.809	730	$6.3 \cdot 10^{-5}$	1030	$3.7 \cdot 10^{-5}$	1850	0.606	3350	0.236	4850	$2.9 \cdot 10^{-2}$
440	0.829	740	$3.2 \cdot 10^{-5}$	1040	$4.9 \cdot 10^{-5}$	1900	0.655	3400	0.226	4900	$4.1 \cdot 10^{-2}$
450	0.847	750	$1.7 \cdot 10^{-5}$	1050	$6.7 \cdot 10^{-5}$	1950	0.699	3450	0.220	4950	$5.7 \cdot 10^{-2}$
460	0.863	760	$< 10^{-5}$	1060	$8.5 \cdot 10^{-5}$	2000	0.735	3500	0.219	5000	$7.5 \cdot 10^{-2}$
470	0.876	770	$< 10^{-5}$	1070	$1.1 \cdot 10^{-4}$	2050	0.766	3550	0.223	5050	$9.3 \cdot 10^{-2}$
480	0.886	780	$< 10^{-5}$	1080	$1.5 \cdot 10^{-4}$	2100	0.793	3600	0.233	5100	0.106
490	0.893	790	$< 10^{-5}$	1090	$1.9 \cdot 10^{-4}$	2150	0.815	3650	0.247	5150	0.112