

Data Sheet



BG61

Reflection factor	
P_d	0.915

Reference thickness	
d [mm]	1

Spectral values guaranteed		
τ_i (405nm)	\geq	0.84
τ_i (514nm)	\geq	0.93
τ_i (633nm)	\geq	0.18
τ_i (694nm)	\leq	0.03
τ_i (1060nm)	\leq	0.008

Refractive Index n	
n_i (365.0 nm) =	1.556
n_h (404.7 nm) =	1.549
n_e (546.1 nm) =	1.537
n_d (587.6 nm) =	1.535
Sellmeier coefficients on request	

Density	
ρ [g/cm ³]	2.81


Bubble content	
Bubble class	2

Chemical Resistance	
FR class	1.0
SR class	52.3
AR class	3.3

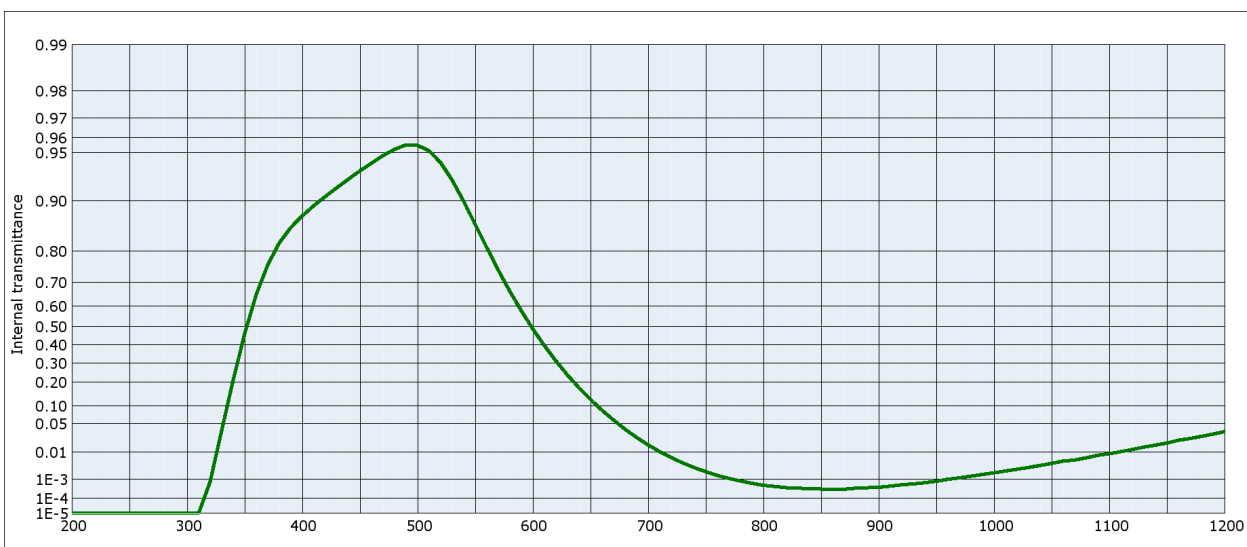
Transformation temperature	
T_g [°C]	402

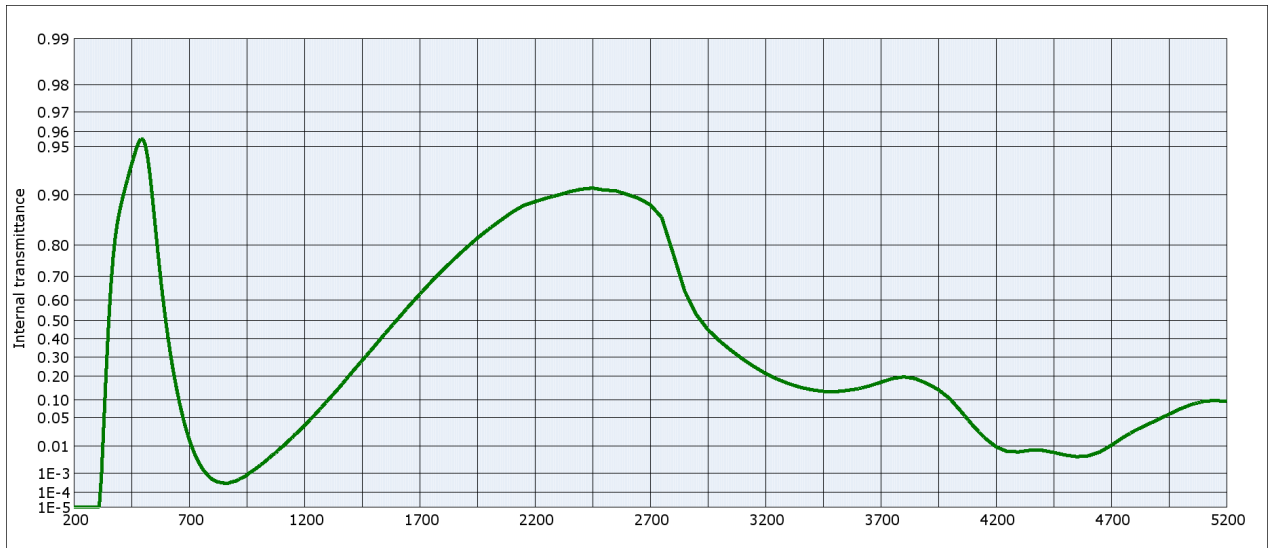
Thermal expansion	
$\alpha_{30/+70^\circ\text{C}}$ [10 ⁻⁶ /K]	11.9
$\alpha_{20/300^\circ\text{C}}$ [10 ⁻⁶ /K]	13.9
$\alpha_{20/200^\circ\text{C}}$ [10 ⁻⁶ /K]	

Temperature coefficient	
T_K [nm/°C]	

Notes
Ionically colored glass
Bandpass filter / shortpass filter
Color compensating filter / IR cut filter
$\lambda_{50\%}(\text{thickness}=0.3\text{mm}) = 648 \text{ nm}$
 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) = 363
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]	1
x	0.349	0.289	0.250	x	0.328	0.272	0.236	x	0.245	0.210	0.189	
y	0.432	0.438	0.435	y	0.415	0.416	0.410	y	0.319	0.307	0.296	
Y	60	46	37	Y	62	48	39	Y	68	55	47	
λ_d [nm]	499	498	497	λ_d [nm]	497	496	495	λ_d [nm]	490	489	488	
P_e	0.22	0.37	0.46	P_e	0.23	0.37	0.47	P_e	0.25	0.39	0.48	





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	0.955	800	$5.2 \cdot 10^{-4}$	1100	$9.0 \cdot 10^{-3}$	2200	0.890	3700	0.172
210	$< 10^{-5}$	510	0.952	810	$4.5 \cdot 10^{-4}$	1110	$1.0 \cdot 10^{-2}$	2250	0.895	3750	0.189
220	$< 10^{-5}$	520	0.942	820	$4.0 \cdot 10^{-4}$	1120	$1.2 \cdot 10^{-2}$	2300	0.899	3800	0.197
230	$< 10^{-5}$	530	0.926	830	$3.7 \cdot 10^{-4}$	1130	$1.4 \cdot 10^{-2}$	2350	0.904	3850	0.189
240	$< 10^{-5}$	540	0.899	840	$3.5 \cdot 10^{-4}$	1140	$1.6 \cdot 10^{-2}$	2400	0.908	3900	0.167
250	$< 10^{-5}$	550	0.860	850	$3.4 \cdot 10^{-4}$	1150	$1.8 \cdot 10^{-2}$	2450	0.909	3950	0.140
260	$< 10^{-5}$	560	0.808	860	$3.3 \cdot 10^{-4}$	1160	$2.1 \cdot 10^{-2}$	2500	0.906	4000	0.105
270	$< 10^{-5}$	570	0.742	870	$3.3 \cdot 10^{-4}$	1170	$2.4 \cdot 10^{-2}$	2550	0.906	4050	$6.4 \cdot 10^{-2}$
280	$< 10^{-5}$	580	0.663	880	$3.7 \cdot 10^{-4}$	1180	$2.7 \cdot 10^{-2}$	2600	0.900	4100	$3.4 \cdot 10^{-2}$
290	$< 10^{-5}$	590	0.577	890	$3.9 \cdot 10^{-4}$	1190	$3.0 \cdot 10^{-2}$	2650	0.895	4150	$1.7 \cdot 10^{-2}$
300	$< 10^{-5}$	600	0.485	900	$4.1 \cdot 10^{-4}$	1200	$3.4 \cdot 10^{-2}$	2700	0.885	4200	$9.7 \cdot 10^{-3}$
310	$< 10^{-5}$	610	0.395	910	$4.7 \cdot 10^{-4}$	1250	$6.0 \cdot 10^{-2}$	2750	0.862	4250	$6.8 \cdot 10^{-3}$
320	$7.7 \cdot 10^{-4}$	620	0.311	920	$5.6 \cdot 10^{-4}$	1300	$9.8 \cdot 10^{-2}$	2800	0.774	4300	$6.7 \cdot 10^{-3}$
330	$3.6 \cdot 10^{-2}$	630	0.236	930	$6.1 \cdot 10^{-4}$	1350	0.147	2850	0.639	4350	$7.6 \cdot 10^{-3}$
340	0.211	640	0.174	940	$6.9 \cdot 10^{-4}$	1400	0.211	2900	0.529	4400	$7.5 \cdot 10^{-3}$
350	0.461	650	0.125	950	$8.1 \cdot 10^{-4}$	1450	0.280	2950	0.450	4450	$6.4 \cdot 10^{-3}$
360	0.650	660	$8.6 \cdot 10^{-2}$	960	$1.0 \cdot 10^{-3}$	1500	0.353	3000	0.389	4500	$5.2 \cdot 10^{-3}$
370	0.759	670	$5.9 \cdot 10^{-2}$	970	$1.2 \cdot 10^{-3}$	1550	0.429	3050	0.337	4550	$4.6 \cdot 10^{-3}$
380	0.820	680	$3.8 \cdot 10^{-2}$	980	$1.4 \cdot 10^{-3}$	1600	0.499	3100	0.290	4600	$4.9 \cdot 10^{-3}$
390	0.854	690	$2.5 \cdot 10^{-2}$	990	$1.6 \cdot 10^{-3}$	1650	0.566	3150	0.249	4650	$6.6 \cdot 10^{-3}$
400	0.876	700	$1.6 \cdot 10^{-2}$	1000	$1.9 \cdot 10^{-3}$	1700	0.625	3200	0.214	4700	$1.1 \cdot 10^{-2}$
410	0.893	710	$1.0 \cdot 10^{-2}$	1010	$2.2 \cdot 10^{-3}$	1750	0.677	3250	0.187	4750	$1.7 \cdot 10^{-2}$
420	0.906	720	$6.9 \cdot 10^{-3}$	1020	$2.6 \cdot 10^{-3}$	1800	0.721	3300	0.166	4800	$2.6 \cdot 10^{-2}$
430	0.917	730	$4.5 \cdot 10^{-3}$	1030	$3.1 \cdot 10^{-3}$	1850	0.759	3350	0.150	4850	$3.5 \cdot 10^{-2}$
440	0.927	740	$3.0 \cdot 10^{-3}$	1040	$3.7 \cdot 10^{-3}$	1900	0.790	3400	0.139	4900	$4.5 \cdot 10^{-2}$
450	0.935	750	$2.1 \cdot 10^{-3}$	1050	$4.3 \cdot 10^{-3}$	1950	0.817	3450	0.133	4950	$5.8 \cdot 10^{-2}$
460	0.942	760	$1.5 \cdot 10^{-3}$	1060	$5.2 \cdot 10^{-3}$	2000	0.838	3500	0.131	5000	$7.3 \cdot 10^{-2}$
470	0.948	770	$1.1 \cdot 10^{-3}$	1070	$5.7 \cdot 10^{-3}$	2050	0.856	3550	0.136	5050	$8.6 \cdot 10^{-2}$
480	0.952	780	$8.4 \cdot 10^{-4}$	1080	$6.7 \cdot 10^{-3}$	2100	0.872	3600	0.143	5100	$9.6 \cdot 10^{-2}$
490	0.956	790	$6.5 \cdot 10^{-4}$	1090	$8.1 \cdot 10^{-3}$	2150	0.883	3650	0.155	5150	$9.9 \cdot 10^{-2}$