

Data Sheet



BG55

Reflection factor	
P_d	0.914

Reference thickness	
d [mm]	1

Spectral values guaranteed		
τ_i (405nm)	\geq	0.76
τ_i (514nm)	\geq	0.93
τ_i (633nm)	\geq	0.18
τ_i (694nm)	\leq	0.016
τ_i (1060nm)	\leq	0.0005

Refractive Index n	
n_i (365.0 nm) =	1.560
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	

Density	
ρ [g/cm ³]	2.65

Bubble content	
Bubble class	2

Chemical Resistance	
FR class	0
SR class	2.0
AR class	2.0

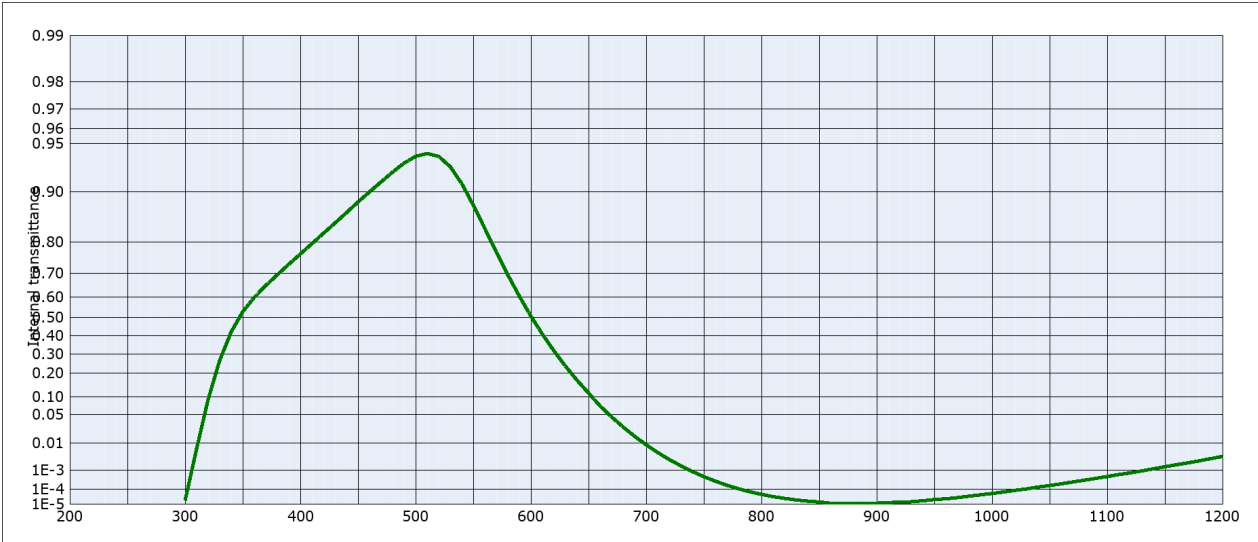
Transformation temperature	
T_g [°C]	453

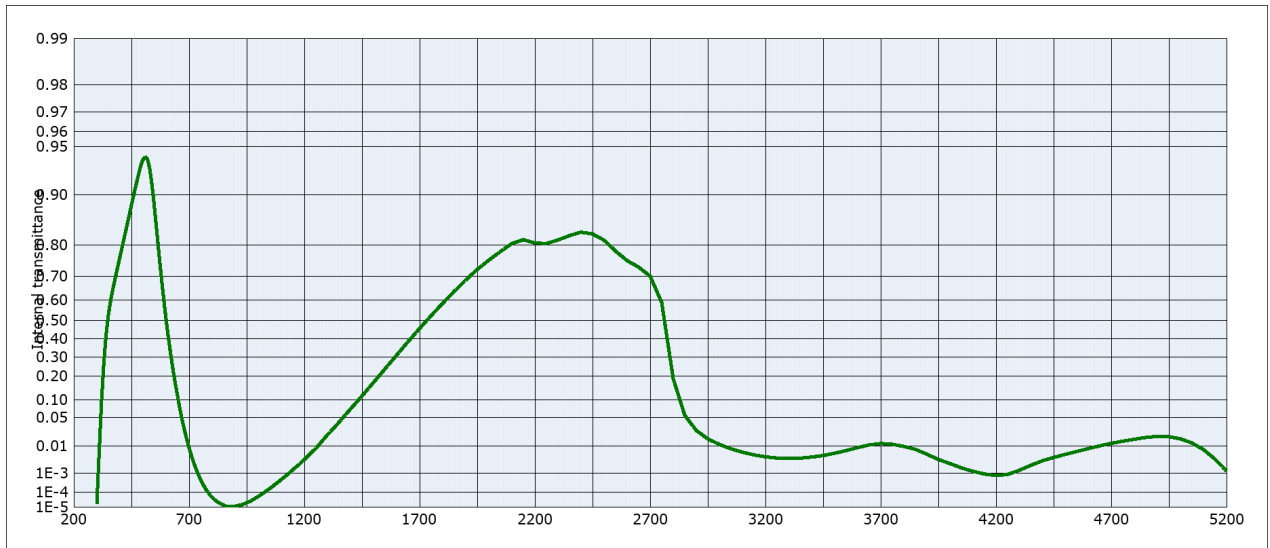
Thermal expansion	
$\alpha_{30/+70^\circ\text{C}}$ [10 ⁻⁶ /K]	7.2
$\alpha_{20/300^\circ\text{C}}$ [10 ⁻⁶ /K]	9.1
$\alpha_{20/200^\circ\text{C}}$ [10 ⁻⁶ /K]	

Temperature coefficient	
T_K [nm/°C]	

Notes
Ionically colored glass
Bandpass filter / shortpass filter
Color compensating filter / IR cut filter
Long-term changes of the polished surface are possible under some circumstances.
CR (ISO/WD 13384) = 1
Knoop hardness HK (0.1/20) = 504
cp = 0,83 J/gK
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	2	3
x	0.356	0.302	0.267	x	0.336	0.285	0.252	x	0.252	0.220	0.201
y	0.438	0.452	0.460	y	0.423	0.432	0.437	y	0.329	0.328	0.328
Y	62	48	39	Y	63	49	41	Y	69	57	48
λ_d [nm]	501	500	500	λ_d [nm]	499	498	498	λ_d [nm]	492	491	491
P_e	0.21	0.33	0.41	P_e	0.21	0.34	0.42	P_e	0.22	0.34	0.41





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	0.940	800	$4.9 \cdot 10^{-5}$	1100	$5.1 \cdot 10^{-4}$	2200	0.804	3700	$1.2 \cdot 10^{-2}$
210	$< 10^{-5}$	510	0.942	810	$3.5 \cdot 10^{-5}$	1110	$6.3 \cdot 10^{-4}$	2250	0.803	3750	$1.1 \cdot 10^{-2}$
220	$< 10^{-5}$	520	0.940	820	$2.7 \cdot 10^{-5}$	1120	$7.6 \cdot 10^{-4}$	2300	0.812	3800	$9.9 \cdot 10^{-3}$
230	$< 10^{-5}$	530	0.930	830	$2.1 \cdot 10^{-5}$	1130	$9.4 \cdot 10^{-4}$	2350	0.823	3850	$8.1 \cdot 10^{-3}$
240	$< 10^{-5}$	540	0.911	840	$1.7 \cdot 10^{-5}$	1140	$1.2 \cdot 10^{-3}$	2400	0.831	3900	$5.6 \cdot 10^{-3}$
250	$< 10^{-5}$	550	0.879	850	$1.5 \cdot 10^{-5}$	1150	$1.4 \cdot 10^{-3}$	2450	0.827	3950	$3.7 \cdot 10^{-3}$
260	$< 10^{-5}$	560	0.833	860	$1.2 \cdot 10^{-5}$	1160	$1.7 \cdot 10^{-3}$	2500	0.812	4000	$2.6 \cdot 10^{-3}$
270	$< 10^{-5}$	570	0.770	870	$1.2 \cdot 10^{-5}$	1170	$2.1 \cdot 10^{-3}$	2550	0.782	4050	$1.7 \cdot 10^{-3}$
280	$< 10^{-5}$	580	0.693	880	$1.2 \cdot 10^{-5}$	1180	$2.5 \cdot 10^{-3}$	2600	0.753	4100	$1.2 \cdot 10^{-3}$
290	$< 10^{-5}$	590	0.603	890	$1.2 \cdot 10^{-5}$	1190	$3.0 \cdot 10^{-3}$	2650	0.732	4150	$9.3 \cdot 10^{-4}$
300	$1.9 \cdot 10^{-5}$	600	0.506	900	$1.2 \cdot 10^{-5}$	1200	$3.7 \cdot 10^{-3}$	2700	0.699	4200	$7.9 \cdot 10^{-4}$
310	$6.7 \cdot 10^{-3}$	610	0.408	910	$1.3 \cdot 10^{-5}$	1250	$8.7 \cdot 10^{-3}$	2750	0.588	4250	$8.8 \cdot 10^{-4}$
320	$9.2 \cdot 10^{-2}$	620	0.317	920	$1.4 \cdot 10^{-5}$	1300	$2.1 \cdot 10^{-2}$	2800	0.189	4300	$1.3 \cdot 10^{-3}$
330	0.265	630	0.235	930	$1.5 \cdot 10^{-5}$	1350	$4.0 \cdot 10^{-2}$	2850	$5.6 \cdot 10^{-2}$	4350	$2.2 \cdot 10^{-3}$
340	0.421	640	0.168	940	$1.8 \cdot 10^{-5}$	1400	$7.2 \cdot 10^{-2}$	2900	$2.6 \cdot 10^{-2}$	4400	$3.2 \cdot 10^{-3}$
350	0.528	650	0.115	950	$2.2 \cdot 10^{-5}$	1450	0.115	2950	$1.6 \cdot 10^{-2}$	4450	$4.3 \cdot 10^{-3}$
360	0.598	660	$7.2 \cdot 10^{-2}$	960	$2.5 \cdot 10^{-5}$	1500	0.171	3000	$1.1 \cdot 10^{-2}$	4500	$5.5 \cdot 10^{-3}$
370	0.650	670	$4.5 \cdot 10^{-2}$	970	$3.0 \cdot 10^{-5}$	1550	0.237	3050	$8.4 \cdot 10^{-3}$	4550	$6.8 \cdot 10^{-3}$
380	0.693	680	$2.7 \cdot 10^{-2}$	980	$3.8 \cdot 10^{-5}$	1600	0.309	3100	$6.5 \cdot 10^{-3}$	4600	$8.5 \cdot 10^{-3}$
390	0.731	690	$1.6 \cdot 10^{-2}$	990	$4.6 \cdot 10^{-5}$	1650	0.384	3150	$5.3 \cdot 10^{-3}$	4650	$1.0 \cdot 10^{-2}$
400	0.765	700	$9.0 \cdot 10^{-3}$	1000	$5.6 \cdot 10^{-5}$	1700	0.456	3200	$4.5 \cdot 10^{-3}$	4700	$1.2 \cdot 10^{-2}$
410	0.794	710	$5.1 \cdot 10^{-3}$	1010	$7.0 \cdot 10^{-5}$	1750	0.524	3250	$4.1 \cdot 10^{-3}$	4750	$1.4 \cdot 10^{-2}$
420	0.821	720	$2.8 \cdot 10^{-3}$	1020	$8.8 \cdot 10^{-5}$	1800	0.584	3300	$4.0 \cdot 10^{-3}$	4800	$1.6 \cdot 10^{-2}$
430	0.845	730	$1.6 \cdot 10^{-3}$	1030	$1.1 \cdot 10^{-4}$	1850	0.638	3350	$4.1 \cdot 10^{-3}$	4850	$1.8 \cdot 10^{-2}$
440	0.866	740	$8.8 \cdot 10^{-4}$	1040	$1.4 \cdot 10^{-4}$	1900	0.684	3400	$4.5 \cdot 10^{-3}$	4900	$1.9 \cdot 10^{-2}$
450	0.884	750	$5.0 \cdot 10^{-4}$	1050	$1.7 \cdot 10^{-4}$	1950	0.724	3450	$5.0 \cdot 10^{-3}$	4950	$1.9 \cdot 10^{-2}$
460	0.900	760	$2.9 \cdot 10^{-4}$	1060	$2.1 \cdot 10^{-4}$	2000	0.754	3500	$6.0 \cdot 10^{-3}$	5000	$1.6 \cdot 10^{-2}$
470	0.913	770	$1.8 \cdot 10^{-4}$	1070	$2.7 \cdot 10^{-4}$	2050	0.781	3550	$7.4 \cdot 10^{-3}$	5050	$1.2 \cdot 10^{-2}$
480	0.925	780	$1.1 \cdot 10^{-4}$	1080	$3.3 \cdot 10^{-4}$	2100	0.803	3600	$9.1 \cdot 10^{-3}$	5100	$7.9 \cdot 10^{-3}$
490	0.934	790	$7.2 \cdot 10^{-5}$	1090	$4.1 \cdot 10^{-4}$	2150	0.813	3650	$1.1 \cdot 10^{-2}$	5150	$3.8 \cdot 10^{-3}$