

Data Sheet



BG63

Density	
ρ [g/cm ³]	2.79

Bubble content	
Bubble class	2

Chemical Resistance	
FR class	1.0
SR class	52.3
AR class	3.3

Transformation temperature	
T _g [°C]	416

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]	

Reflection factor	
P _d	0.916

Reference thickness	
d [mm]	1

Spectral values guaranteed		
τ_i (405nm)	≥	0.95
τ_i (514nm)	≥	0.96
τ_i (633nm)	≥	0.5
τ_i (694nm)	≤	0.25
τ_i (1060nm)	≤	0.16

Refractive Index n	
n _i (365.0 nm) =	1.552
n _h (404.7 nm) =	1.546
n _g (435.8 nm) =	1.542
n _F (480.0 nm) =	1.538
Sellmeier coefficients on request	

Notes

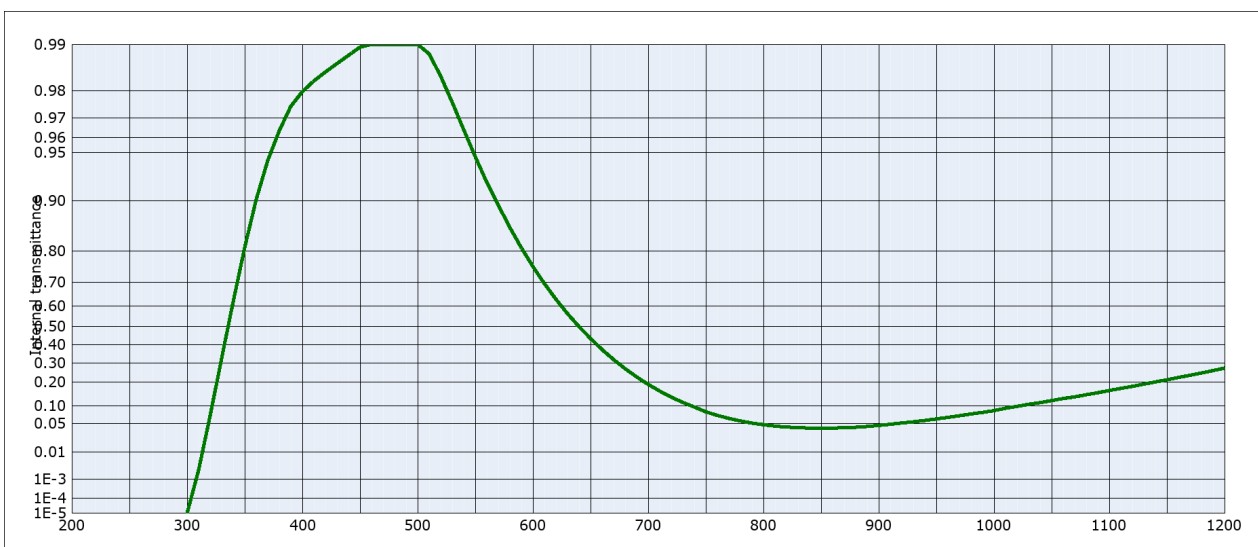
Ionically colored glass
Bandpass filter / shortpass filter
Color compensating filter / IR cut filter
lambda_50%(thickness=1.5mm) = 614 nm
Long-term changes of the polished surface are possible under some circumstances.
Knoop hardness HK (0.1/20) = 362
All data without tolerances are to be understood to be reference values.
Guaranteed values are only those values listed in the section "Spectral values guaranteed".

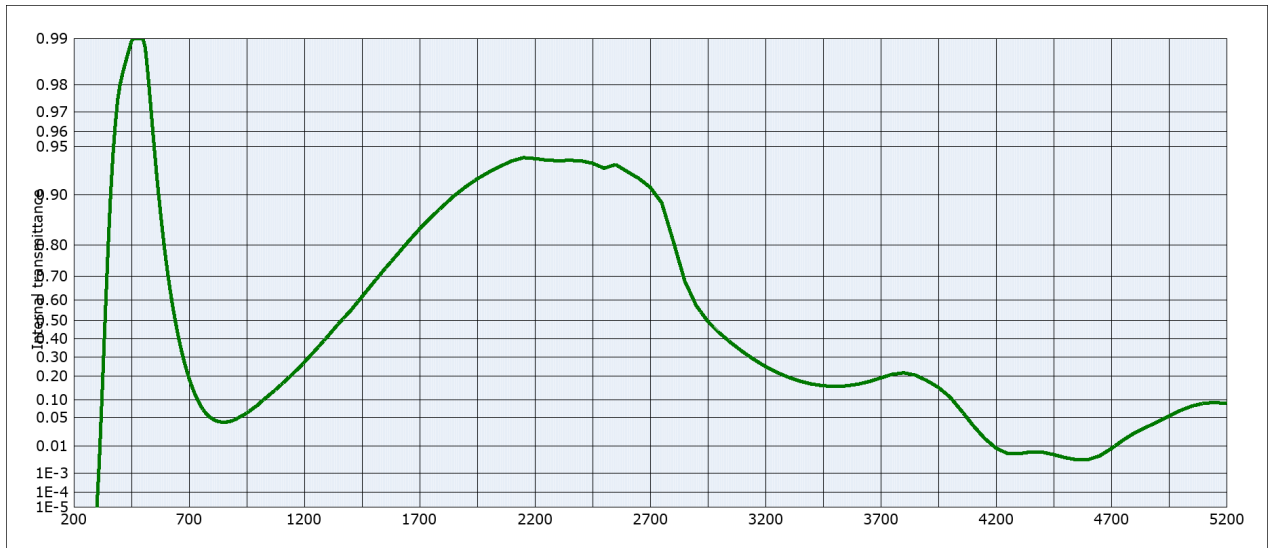
Colorimetric evaluation

Illuminant	A (Planck T = 2856 K)		
	1	2	3
d [mm]			
x	0.403	0.366	0.336
y	0.420	0.428	0.432
Y	76	66	59
λ _d [nm]	500	499	499
P _e	0.10	0.19	0.26

Illuminant	Planck T = 3200 K		
	1	2	3
d [mm]			
x	0.380	0.344	0.316
y	0.408	0.412	0.414
Y	77	68	60
λ _d [nm]	498	497	497
P _e	0.11	0.19	0.27

Illuminant	D65 (T _c = 6504 K)		
	1	2	3
d [mm]			
x	0.280	0.255	0.237
y	0.325	0.319	0.313
Y	81	73	67
λ _d [nm]	490	489	489
P _e	0.12	0.22	0.29





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	0.991	800	$4.8 \cdot 10^{-2}$	1100	0.162	2200	0.941	3700	0.192
210	$< 10^{-5}$	510	0.988	810	$4.5 \cdot 10^{-2}$	1110	0.171	2250	0.939	3750	0.209
220	$< 10^{-5}$	520	0.984	820	$4.3 \cdot 10^{-2}$	1120	0.181	2300	0.939	3800	0.217
230	$< 10^{-5}$	530	0.976	830	$4.2 \cdot 10^{-2}$	1130	0.191	2350	0.939	3850	0.206
240	$< 10^{-5}$	540	0.964	840	$4.1 \cdot 10^{-2}$	1140	0.202	2400	0.939	3900	0.180
250	$< 10^{-5}$	550	0.947	850	$4.1 \cdot 10^{-2}$	1150	0.212	2450	0.936	3950	0.149
260	$< 10^{-5}$	560	0.923	860	$4.1 \cdot 10^{-2}$	1160	0.224	2500	0.932	4000	0.111
270	$< 10^{-5}$	570	0.893	870	$4.1 \cdot 10^{-2}$	1170	0.235	2550	0.935	4050	$6.7 \cdot 10^{-2}$
280	$< 10^{-5}$	580	0.854	880	$4.2 \cdot 10^{-2}$	1180	0.247	2600	0.928	4100	$3.5 \cdot 10^{-2}$
290	$< 10^{-5}$	590	0.808	890	$4.4 \cdot 10^{-2}$	1190	0.259	2650	0.921	4150	$1.7 \cdot 10^{-2}$
300	$< 10^{-5}$	600	0.754	900	$4.6 \cdot 10^{-2}$	1200	0.273	2700	0.910	4200	$8.8 \cdot 10^{-3}$
310	$2.4 \cdot 10^{-3}$	610	0.694	910	$4.9 \cdot 10^{-2}$	1250	0.340	2750	0.888	4250	$5.9 \cdot 10^{-3}$
320	$7.0 \cdot 10^{-2}$	620	0.630	920	$5.2 \cdot 10^{-2}$	1300	0.412	2800	0.809	4300	$5.8 \cdot 10^{-3}$
330	0.327	630	0.563	930	$5.4 \cdot 10^{-2}$	1350	0.484	2850	0.681	4350	$6.6 \cdot 10^{-3}$
340	0.619	640	0.498	940	$5.8 \cdot 10^{-2}$	1400	0.548	2900	0.573	4400	$6.6 \cdot 10^{-3}$
350	0.809	650	0.434	950	$6.1 \cdot 10^{-2}$	1450	0.614	2950	0.494	4450	$5.4 \cdot 10^{-3}$
360	0.902	660	0.373	960	$6.5 \cdot 10^{-2}$	1500	0.675	3000	0.433	4500	$4.3 \cdot 10^{-3}$
370	0.944	670	0.318	970	$7.0 \cdot 10^{-2}$	1550	0.727	3050	0.379	4550	$3.6 \cdot 10^{-3}$
380	0.964	680	0.270	980	$7.5 \cdot 10^{-2}$	1600	0.770	3100	0.330	4600	$3.6 \cdot 10^{-3}$
390	0.975	690	0.227	990	$8.0 \cdot 10^{-2}$	1650	0.808	3150	0.286	4650	$4.9 \cdot 10^{-3}$
400	0.980	700	0.190	1000	$8.5 \cdot 10^{-2}$	1700	0.839	3200	0.249	4700	$8.5 \cdot 10^{-3}$
410	0.983	710	0.159	1010	$9.3 \cdot 10^{-2}$	1750	0.863	3250	0.219	4750	$1.5 \cdot 10^{-2}$
420	0.985	720	0.134	1020	$9.9 \cdot 10^{-2}$	1800	0.882	3300	0.195	4800	$2.3 \cdot 10^{-2}$
430	0.987	730	0.113	1030	0.106	1850	0.899	3350	0.177	4850	$3.1 \cdot 10^{-2}$
440	0.988	740	$9.7 \cdot 10^{-2}$	1040	0.112	1900	0.911	3400	0.164	4900	$4.1 \cdot 10^{-2}$
450	0.990	750	$8.2 \cdot 10^{-2}$	1050	0.120	1950	0.920	3450	0.156	4950	$5.4 \cdot 10^{-2}$
460	0.991	760	$7.1 \cdot 10^{-2}$	1060	0.128	2000	0.928	3500	0.153	5000	$6.8 \cdot 10^{-2}$
470	0.992	770	$6.3 \cdot 10^{-2}$	1070	0.135	2050	0.934	3550	0.156	5050	$8.1 \cdot 10^{-2}$
480	0.992	780	$5.6 \cdot 10^{-2}$	1080	0.144	2100	0.939	3600	0.163	5100	$8.9 \cdot 10^{-2}$
490	0.992	790	$5.1 \cdot 10^{-2}$	1090	0.152	2150	0.941	3650	0.175	5150	$9.2 \cdot 10^{-2}$