

Data Sheet



BG64

Density	
ρ [g/cm ³]	2.78

Notes

Ionically colored glass
Bandpass filter / shortpass filter
Color compensating filter / IR cut filter
 $\lambda_{50\%}(\text{thickness}=3\text{mm}) = 619 \text{ nm}$

Reflection factor	
P_d	0.916

Bubble content	
Bubble class	2

Reference thickness	
d [mm]	1

Chemical Resistance	
FR class	1.0
SR class	52.3
AR class	3.3

Spectral values guaranteed		
τ_i (405nm)	\geq	0.99
τ_i (514nm)	\geq	0.99
τ_i (633nm)	\geq	0.72
τ_i (694nm)	\leq	0.55
τ_i (1060nm)	\leq	0.45

Transformation temperature	
T_g [°C]	417

Thermal expansion	
$\alpha_{30/+70^\circ\text{C}}$ [$10^{-6}/\text{K}$]	12.0
$\alpha_{20/300^\circ\text{C}}$ [$10^{-6}/\text{K}$]	13.8
$\alpha_{20/200^\circ\text{C}}$ [$10^{-6}/\text{K}$]	

Refractive Index n	
n_i (365.0 nm) =	1.549
n_h (404.7 nm) =	1.543
n_e (546.1 nm) =	1.532
n_d (587.6 nm) =	1.530
Sellmeier coefficients on request	

Temperature coefficient	
T_K [nm/°C]	

Long-term changes in the polished surface are possible under some circumstances.

Knoop hardness HK (0.1/20) = 371

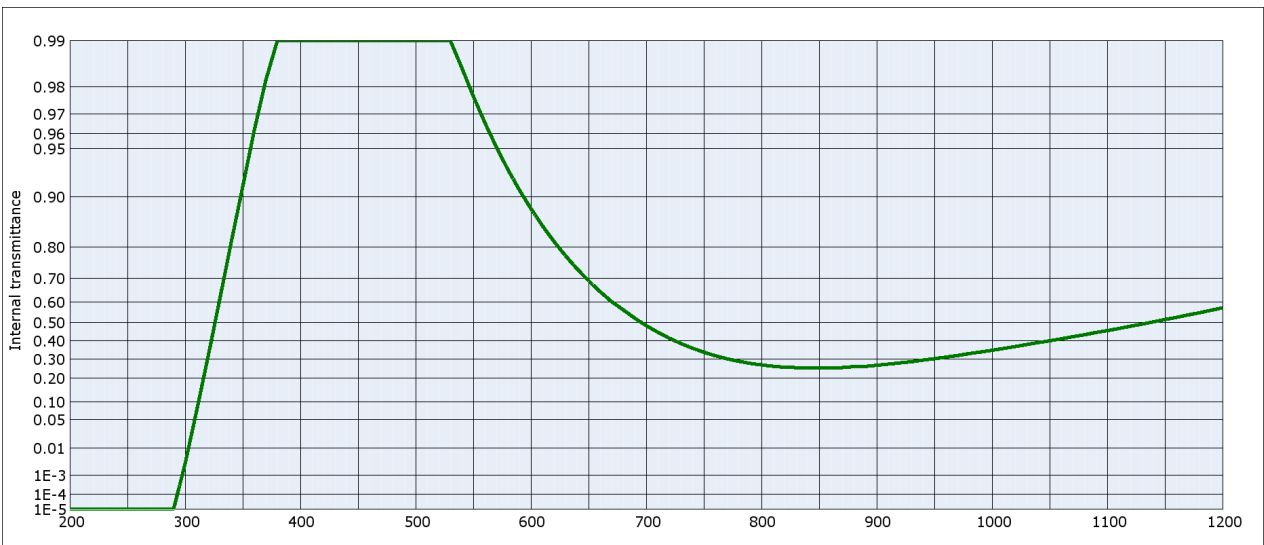
All data without tolerances are to be understood to be reference values.
Guaranteed values are only those values listed in the section "Spectral values guaranteed".

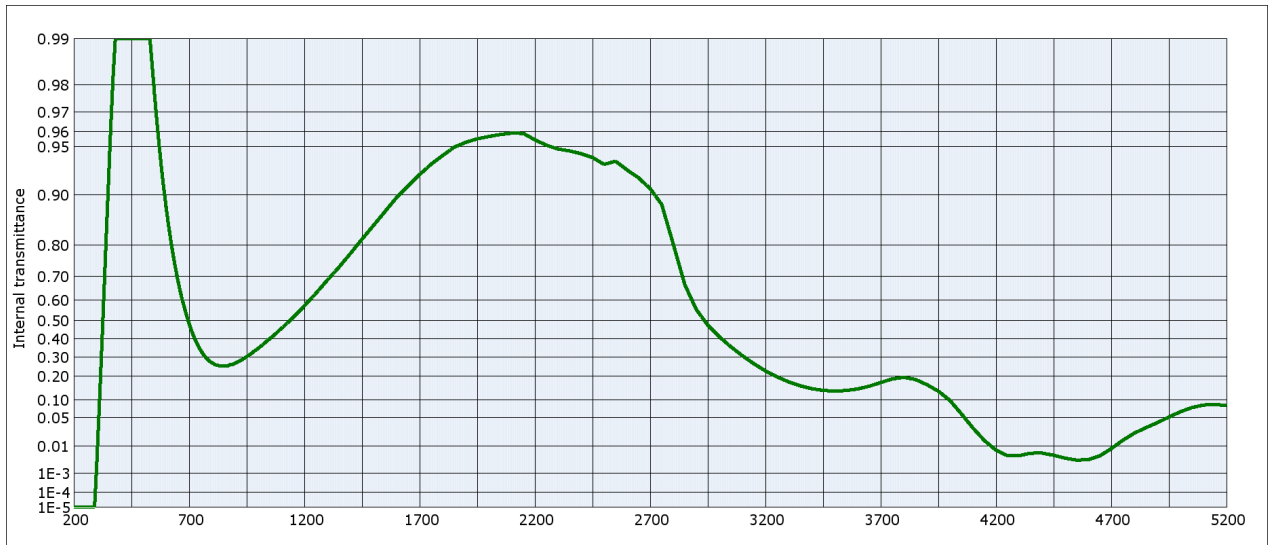
Colorimetric evaluation

Illuminant	A (Planck T = 2856 K)		
	1	2	3
d [mm]			
x	0.427	0.408	0.391
y	0.414	0.419	0.423
Y	84	78	73
λ_d [nm]	500	500	500
P_e	0.05	0.09	0.13

Illuminant	Planck T = 3200 K		
	1	2	3
d [mm]			
x	0.403	0.385	0.368
y	0.403	0.407	0.410
Y	85	79	74
λ_d [nm]	498	498	498
P_e	0.05	0.09	0.13

Illuminant	D65 (T _c = 6504 K)		
	1	2	3
d [mm]			
x	0.297	0.284	0.272
y	0.327	0.325	0.323
Y	87	82	79
λ_d [nm]	490	490	490
P_e	0.06	0.11	0.15





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	0.997	800	0.268	1100	0.455	2200	0.955	3700	0.171
210	$< 10^{-5}$	510	0.996	810	0.261	1110	0.467	2250	0.951	3750	0.187
220	$< 10^{-5}$	520	0.994	820	0.256	1120	0.479	2300	0.948	3800	0.195
230	$< 10^{-5}$	530	0.990	830	0.254	1130	0.490	2350	0.947	3850	0.185
240	$< 10^{-5}$	540	0.985	840	0.251	1140	0.502	2400	0.945	3900	0.161
250	$< 10^{-5}$	550	0.977	850	0.252	1150	0.514	2450	0.942	3950	0.134
260	$< 10^{-5}$	560	0.966	860	0.252	1160	0.525	2500	0.935	4000	$9.9 \cdot 10^{-2}$
270	$< 10^{-5}$	570	0.951	870	0.254	1170	0.537	2550	0.938	4050	$5.9 \cdot 10^{-2}$
280	$< 10^{-5}$	580	0.932	880	0.259	1180	0.548	2600	0.930	4100	$3.0 \cdot 10^{-2}$
290	$< 10^{-5}$	590	0.909	890	0.260	1190	0.560	2650	0.921	4150	$1.5 \cdot 10^{-2}$
300	$3.0 \cdot 10^{-3}$	600	0.882	900	0.266	1200	0.572	2700	0.908	4200	$7.6 \cdot 10^{-3}$
310	$7.2 \cdot 10^{-2}$	610	0.850	910	0.272	1250	0.629	2750	0.885	4250	$5.0 \cdot 10^{-3}$
320	0.314	620	0.814	920	0.279	1300	0.684	2800	0.802	4300	$5.0 \cdot 10^{-3}$
330	0.610	630	0.775	930	0.285	1350	0.731	2850	0.666	4350	$6.1 \cdot 10^{-3}$
340	0.812	640	0.733	940	0.294	1400	0.775	2900	0.554	4400	$6.1 \cdot 10^{-3}$
350	0.913	650	0.689	950	0.301	1450	0.814	2950	0.473	4450	$5.1 \cdot 10^{-3}$
360	0.962	660	0.645	960	0.310	1500	0.846	3000	0.411	4500	$4.1 \cdot 10^{-3}$
370	0.982	670	0.601	970	0.319	1550	0.873	3050	0.356	4550	$3.5 \cdot 10^{-3}$
380	0.990	680	0.562	980	0.329	1600	0.896	3100	0.307	4600	$3.6 \cdot 10^{-3}$
390	0.993	690	0.521	990	0.338	1650	0.912	3150	0.263	4650	$4.9 \cdot 10^{-3}$
400	0.995	700	0.482	1000	0.348	1700	0.925	3200	0.227	4700	$8.5 \cdot 10^{-3}$
410	0.996	710	0.447	1010	0.357	1750	0.936	3250	0.197	4750	$1.5 \cdot 10^{-2}$
420	0.996	720	0.414	1020	0.368	1800	0.943	3300	0.174	4800	$2.3 \cdot 10^{-2}$
430	0.997	730	0.385	1030	0.379	1850	0.950	3350	0.156	4850	$3.1 \cdot 10^{-2}$
440	0.997	740	0.359	1040	0.390	1900	0.953	3400	0.144	4900	$4.0 \cdot 10^{-2}$
450	0.997	750	0.337	1050	0.400	1950	0.956	3450	0.137	4950	$5.1 \cdot 10^{-2}$
460	0.998	760	0.317	1060	0.411	2000	0.957	3500	0.134	5000	$6.5 \cdot 10^{-2}$
470	0.998	770	0.301	1070	0.422	2050	0.958	3550	0.136	5050	$7.6 \cdot 10^{-2}$
480	0.998	780	0.288	1080	0.433	2100	0.959	3600	0.143	5100	$8.4 \cdot 10^{-2}$
490	0.998	790	0.276	1090	0.445	2150	0.959	3650	0.154	5150	$8.6 \cdot 10^{-2}$