

BG57

Optical properties	
Reflection factor	
$P_d = 0,911$	
Spectral values guaranteed	
τ_i (405 nm)	$\geq 0,35$
τ_i (430 nm)	$\geq 0,37$
τ_i (514 nm)	$\geq 0,71$
τ_i (565 nm)	$\geq 0,42$
τ_i (633 nm)	$\leq 0,02$
τ_i (1500 nm)	$\leq 0,02$
Refractive indices	
n_F (486 nm)	= 1,56
n_e (546 nm)	= 1,55
n_d (587,6 nm)	= 1,55
Sellmeier coefficients	
valid from 440 nm to 1550 nm	
B_1	1,2553
B_2	0,1147
B_3	30,4267
C_1	4,447E-03 μm^2
C_2	5,4025E-02 μm^2
C_3	4843,287 μm^2
Internal quality	
Bubble class	0

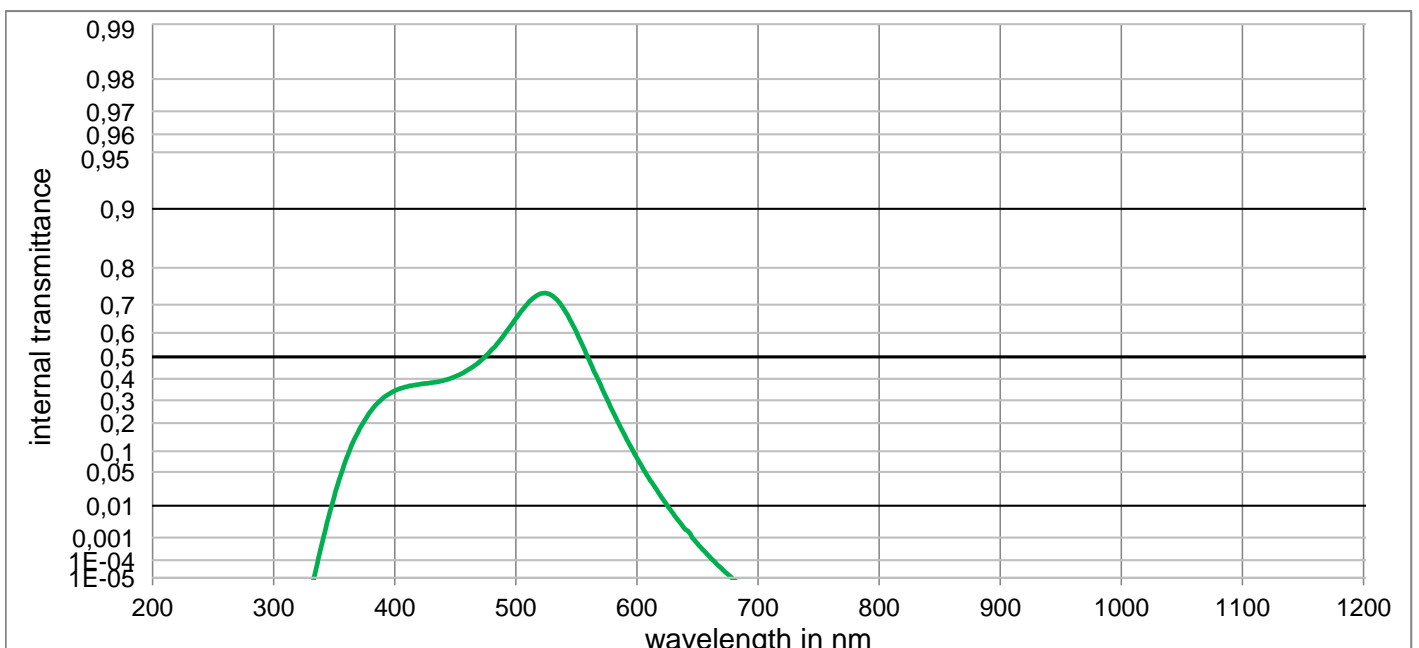
Mechanical properties	
Reference thickness	
$d = 1,00 \text{ mm}$	
Density	
$\rho = 2,81 \text{ g/cm}^3$	
Knoop hardness	
HK[0.1/20] = 418	

Thermal properties	
Transformation temperature	
$T_g = 411 \text{ }^\circ\text{C}$	
Thermal expansion in $10^{-6}/\text{K}$	
α (-30 $^\circ\text{C}/+70^\circ\text{C}$)	= 9,7
α (20 $^\circ\text{C}/300^\circ\text{C}$)	= 11,5

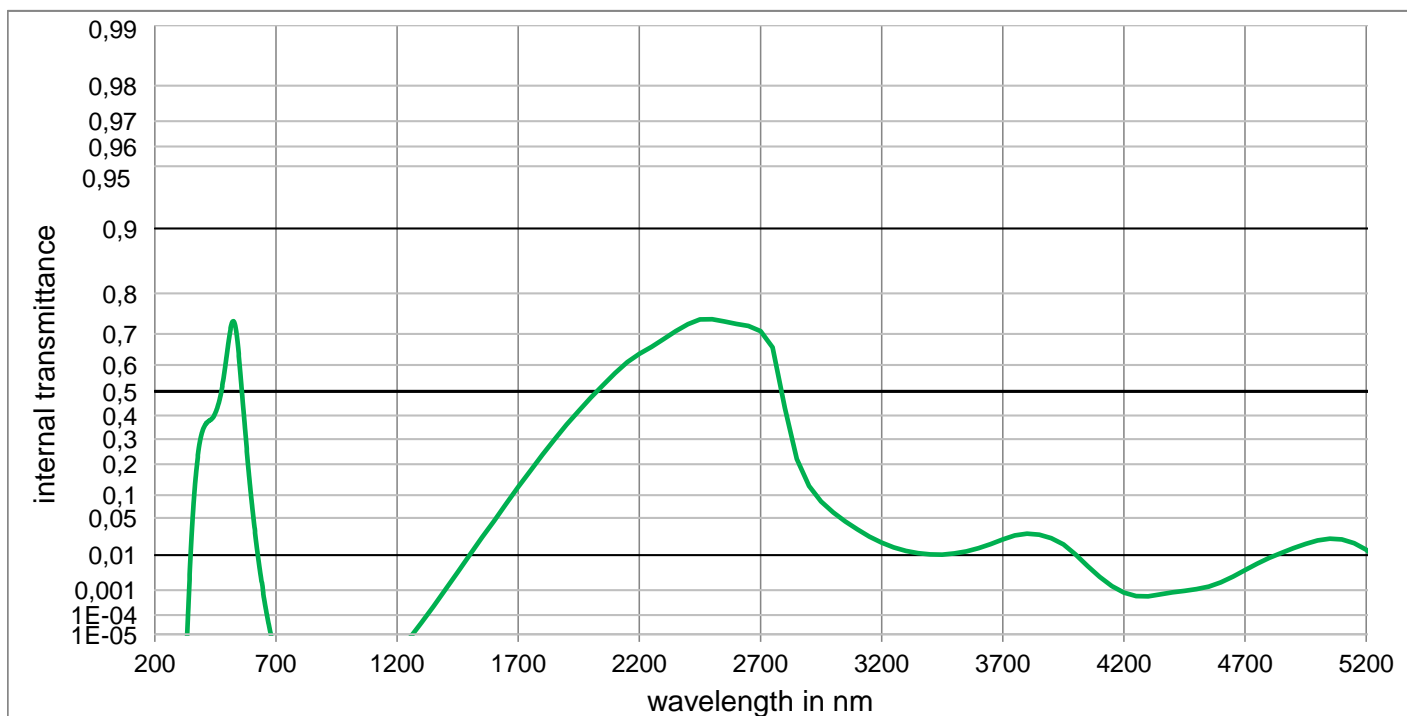
Chemical properties	
Chemical resistance	
FR class	= 0
SR class	= 5.2
AR class	= 3
Resistance against humidity	
Sensitive glass	
see pocket catalogue "Optical Filter Glass 2020", chapter 5.5	

Colormetric properties				
		1 mm	2 mm	3 mm
Illuminant D65	x	0,204	0,178	0,164
	y	0,379	0,442	0,507
	Y	40,3	23,8	15,1
	λ_d	497 nm	502 nm	507 nm
	P_e	0,367	0,438	0,484
Illuminant A	x	0,265	0,215	0,191
	y	0,501	0,557	0,604
	Y	32,5	18,1	11,2
	λ_d	504 nm	507 nm	510 nm
	P_e	0,412	0,526	0,589

Notes	
Ionically colored glass	
Bandpass filter / Shortpass filter	
NIR cutoff filter	
$\lambda_{50\%}(d=0.11\text{mm}) @ 634 \text{ nm}$	
DIN 58131	
Disclaimer	
All data without tolerances are to be understood to be reference values.	



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Internal transmittance τ_i at reference thickness
 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	< 1,0E-05	500	6,534E-01	800	< 1,000E-05	1100	< 1,000E-05	2200	6,377E-01	3700	2,143E-02
210	< 1,0E-05	510	7,048E-01	810	< 1,000E-05	1110	< 1,000E-05	2250	6,608E-01	3750	2,541E-02
220	< 1,0E-05	520	7,329E-01	820	< 1,000E-05	1120	< 1,000E-05	2300	6,849E-01	3800	2,739E-02
230	< 1,0E-05	530	7,276E-01	830	< 1,000E-05	1130	< 1,000E-05	2350	7,078E-01	3850	2,629E-02
240	< 1,0E-05	540	6,838E-01	840	< 1,000E-05	1140	< 1,000E-05	2400	7,273E-01	3900	2,273E-02
250	< 1,0E-05	550	6,025E-01	850	< 1,000E-05	1150	< 1,000E-05	2450	7,395E-01	3950	1,712E-02
260	< 1,0E-05	560	4,918E-01	860	< 1,000E-05	1160	< 1,000E-05	2500	7,402E-01	4000	1,035E-02
270	< 1,0E-05	570	3,699E-01	870	< 1,000E-05	1170	< 1,000E-05	2550	7,343E-01	4050	5,365E-03
280	< 1,0E-05	580	2,501E-01	880	< 1,000E-05	1180	< 1,000E-05	2600	7,278E-01	4100	2,666E-03
290	< 1,0E-05	590	1,514E-01	890	< 1,000E-05	1190	< 1,000E-05	2650	7,223E-01	4150	1,375E-03
300	< 1,0E-05	600	8,109E-02	900	< 1,000E-05	1200	< 1,000E-05	2700	7,081E-01	4200	8,151E-04
310	< 1,0E-05	610	3,824E-02	910	< 1,000E-05	1250	< 1,000E-05	2750	6,591E-01	4250	6,075E-04
320	< 1,000E-05	620	1,649E-02	920	< 1,000E-05	1300	4,250E-05	2800	4,327E-01	4300	6,014E-04
330	< 1,000E-05	630	6,063E-03	930	< 1,000E-05	1350	2,424E-04	2850	2,198E-01	4350	7,125E-04
340	6,058E-04	640	1,958E-03	940	< 1,000E-05	1400	1,062E-03	2900	1,259E-01	4400	8,454E-04
350	1,687E-02	650	5,678E-04	950	< 1,000E-05	1450	3,664E-03	2950	8,382E-02	4450	9,521E-04
360	7,972E-02	660	1,473E-04	960	< 1,000E-05	1500	1,014E-02	3000	5,999E-02	4500	1,083E-03
370	1,685E-01	670	3,477E-05	970	< 1,000E-05	1550	2,340E-02	3050	4,408E-02	4550	1,327E-03
380	2,498E-01	680	< 1,000E-05	980	< 1,000E-05	1600	4,450E-02	3100	3,254E-02	4600	1,813E-03
390	3,088E-01	690	< 1,000E-05	990	< 1,000E-05	1650	7,875E-02	3150	2,429E-02	4650	2,713E-03
400	3,445E-01	700	< 1,000E-05	1000	< 1,000E-05	1700	1,230E-01	3200	1,859E-02	4700	4,191E-03
410	3,632E-01	710	< 1,000E-05	1010	< 1,000E-05	1750	1,764E-01	3250	1,484E-02	4750	6,236E-03
420	3,744E-01	720	< 1,000E-05	1020	< 1,000E-05	1800	2,367E-01	3300	1,246E-02	4800	8,626E-03
430	3,818E-01	730	< 1,000E-05	1030	< 1,000E-05	1850	2,994E-01	3350	1,104E-02	4850	1,127E-02
440	3,919E-01	740	< 1,000E-05	1040	< 1,000E-05	1900	3,617E-01	3400	1,035E-02	4900	1,428E-02
450	4,108E-01	750	< 1,000E-05	1050	< 1,000E-05	1950	4,199E-01	3450	1,030E-02	4950	1,756E-02
460	4,399E-01	760	< 1,000E-05	1060	< 1,000E-05	2000	4,746E-01	3500	1,088E-02	5000	2,055E-02
470	4,790E-01	770	< 1,000E-05	1070	< 1,000E-05	2050	5,244E-01	3550	1,217E-02	5050	2,217E-02
480	5,307E-01	780	< 1,000E-05	1080	< 1,000E-05	2100	5,704E-01	3600	1,425E-02	5100	2,143E-02
490	5,905E-01	790	< 1,000E-05	1090	< 1,000E-05	2150	6,100E-01	3650	1,735E-02	5150	1,821E-02