

BG39

Optical properties	
Reflection factor	
$P_d = 0,914$	
Spectral values guaranteed	
τ_i (350 nm)	$\geq 0,6$
τ_i (405 nm)	$\geq 0,85$
τ_i (514 nm)	$\geq 0,93$
τ_i (633 nm)	$\leq 0,3$
τ_i (694 nm)	$\leq 0,03$
τ_i (1060 nm)	$\leq 0,001$
Refractive indices	
n_F (486 nm)	= 1,54
n_e (546 nm)	= 1,54
n_d (587,6 nm)	= 1,54
Sellmeier coefficients	
valid from 440 nm to 1550 nm	
B_1	0,4382
B_2	0,8900
B_3	7,4825
C_1	2,508E-02 μm^2
C_2	1,2201E-04 μm^2
C_3	973,996 μm^2
Internal quality	
Bubble class	2

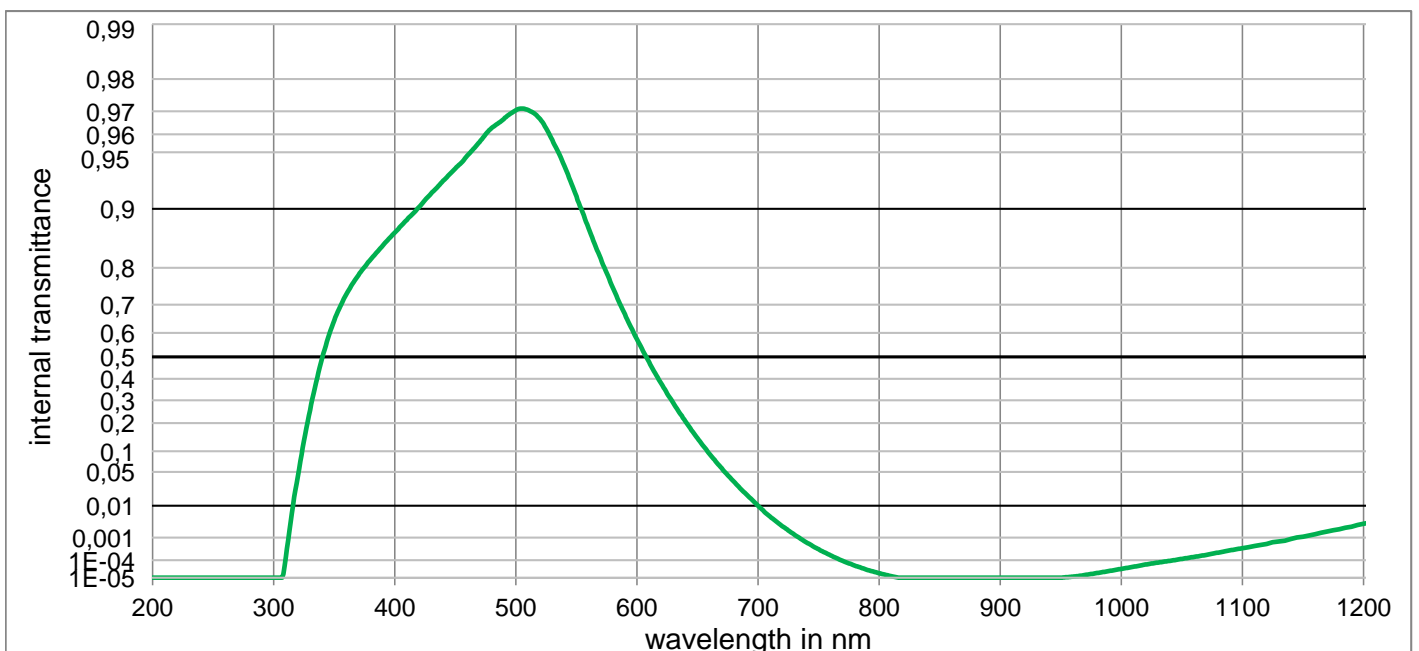
Mechanical properties	
Reference thickness	
$d = 1,00 \text{ mm}$	
Density	
$\rho = 2,74 \text{ g/cm}^3$	
Knoop hardness	
HK[0.1/20] = 386	

Thermal properties	
Transformation temperature	
$T_g = 322 \text{ }^\circ\text{C}$	
Thermal expansion in $10^{-6}/\text{K}$	
α (-30 $^\circ\text{C}/+70^\circ\text{C}$)	= 11,6
α (20 $^\circ\text{C}/200^\circ\text{C}$)	= 13,1

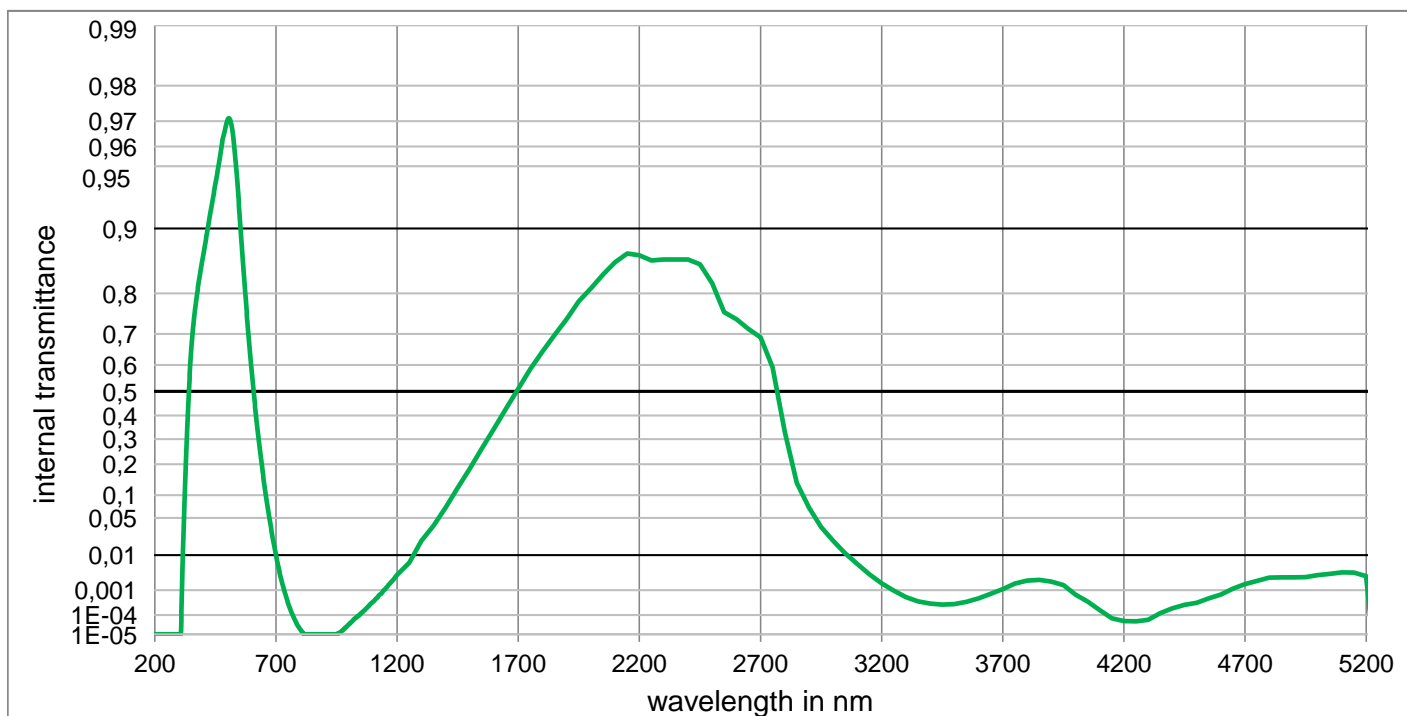
Chemical properties	
Chemical resistance	
FR class	= 0
SR class	= 5.1
AR class	= 3
Resistance against humidity	
Delicate glass	
see pocket catalogue "Optical Filter Glass 2020", chapter 5.5	

Colorimetric properties				
		1 mm	2 mm	3 mm
Illuminant D65	x	0,257	0,226	0,207
	y	0,326	0,322	0,318
	Y	72,8	62,3	55,1
	λ_d	491 nm	490 nm	490 nm
	P_e	0,207	0,321	0,395
Illuminant A	x	0,365	0,314	0,279
	y	0,434	0,445	0,450
	Y	65,9	53,3	45,2
	λ_d	500 nm	500 nm	499 nm
	P_e	0,188	0,305	0,385

Notes	
Ionically colored glass	
Bandpass filter / Shortpass filter	
NIR cutoff filter	
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	9,704E-01	800	1,914E-05	1100	3,654E-04	2200	8,661E-01	3700	1,086E-03
210	< 1,0E-05	510	9,705E-01	810	1,254E-05	1110	4,625E-04	2250	8,585E-01	3750	1,648E-03
220	< 1,0E-05	520	9,670E-01	820	< 1,000E-05	1120	5,538E-04	2300	8,600E-01	3800	2,075E-03
230	< 1,0E-05	530	9,571E-01	830	< 1,000E-05	1130	7,037E-04	2350	8,600E-01	3850	2,173E-03
240	< 1,0E-05	540	9,410E-01	840	< 1,000E-05	1140	8,786E-04	2400	8,600E-01	3900	1,910E-03
250	< 1,0E-05	550	9,140E-01	850	< 1,000E-05	1150	1,070E-03	2450	8,529E-01	3950	1,476E-03
260	< 1,0E-05	560	8,740E-01	860	< 1,000E-05	1160	1,330E-03	2500	8,200E-01	4000	7,000E-04
270	< 1,0E-05	570	8,200E-01	870	< 1,000E-05	1170	1,667E-03	2550	7,577E-01	4050	3,784E-04
280	< 1,0E-05	580	7,510E-01	880	< 1,000E-05	1180	2,012E-03	2600	7,400E-01	4100	1,663E-04
290	< 1,0E-05	590	6,680E-01	890	< 1,000E-05	1190	2,445E-03	2650	7,143E-01	4150	6,966E-05
300	< 1,0E-05	600	5,750E-01	900	< 1,000E-05	1200	3,055E-03	2700	6,900E-01	4200	5,188E-05
310	1,5E-04	610	4,760E-01	910	< 1,000E-05	1250	6,600E-03	2750	5,918E-01	4250	4,955E-05
320	4,200E-02	620	3,780E-01	920	< 1,000E-05	1300	2,000E-02	2800	3,300E-01	4300	6,000E-05
330	2,560E-01	630	2,870E-01	930	< 1,000E-05	1350	3,770E-02	2850	1,355E-01	4350	1,236E-04
340	4,940E-01	640	2,070E-01	940	< 1,000E-05	1400	7,000E-02	2900	7,000E-02	4400	2,000E-04
350	6,470E-01	650	1,420E-01	950	1,008E-05	1450	1,206E-01	2950	3,614E-02	4450	2,767E-04
360	7,320E-01	660	9,200E-02	960	1,175E-05	1500	1,838E-01	3000	2,000E-02	4500	3,388E-04
370	7,830E-01	670	5,700E-02	970	1,482E-05	1550	2,620E-01	3050	1,096E-02	4550	5,000E-04
380	8,180E-01	680	3,371E-02	980	1,948E-05	1600	3,440E-01	3100	6,000E-03	4600	7,000E-04
390	8,450E-01	690	1,900E-02	990	2,563E-05	1650	4,307E-01	3150	3,148E-03	4650	1,138E-03
400	8,670E-01	700	1,000E-02	1000	3,406E-05	1700	5,100E-01	3200	1,694E-03	4700	1,589E-03
410	8,860E-01	710	5,032E-03	1010	4,488E-05	1750	5,862E-01	3250	9,638E-04	4750	2,037E-03
420	9,020E-01	720	2,553E-03	1020	5,930E-05	1800	6,455E-01	3300	5,585E-04	4800	2,523E-03
430	9,170E-01	730	1,289E-03	1030	7,490E-05	1850	6,974E-01	3350	3,855E-04	4850	2,570E-03
440	9,290E-01	740	6,470E-04	1040	9,240E-05	1900	7,400E-01	3400	3,148E-04	4900	2,594E-03
450	9,390E-01	750	3,320E-04	1050	1,167E-04	1950	7,831E-01	3450	2,871E-04	4950	2,642E-03
460	9,480E-01	760	1,712E-04	1060	1,452E-04	2000	8,100E-01	3500	3,000E-04	5000	3,000E-03
470	9,560E-01	770	9,260E-05	1070	1,828E-04	2050	8,359E-01	3550	3,648E-04	5050	3,296E-03
480	9,630E-01	780	5,137E-05	1080	2,333E-04	2100	8,557E-01	3600	5,093E-04	5100	3,614E-03
490	9,670E-01	790	3,007E-05	1090	2,972E-04	2150	8,689E-01	3650	7,430E-04	5150	3,548E-03