

BG18

Optical properties	
Reflection factor	
$P_d = 0,915$	
Spectral values guaranteed	
τ_i (350 nm)	$\geq 0,3$
τ_i (405 nm)	$\geq 0,65$
τ_i (514 nm)	$\geq 0,88$
τ_i (633 nm)	$\leq 0,25$
τ_i (694 nm)	$\leq 0,03$
τ_i (1060 nm)	$\leq 0,0005$
Refractive indices	
n_F (486 nm)	= 1,54
n_e (546 nm)	= 1,54
n_d (587,6 nm)	= 1,53
Sellmeier coefficients	
valid from 440 nm to 1550 nm	
B_1	1,2546
B_2	0,0793
B_3	90,1178
C_1	1,531E-03 μm^2
C_2	7,2019E-02 μm^2
C_3	8112,428 μm^2
Internal quality	
Bubble class	2

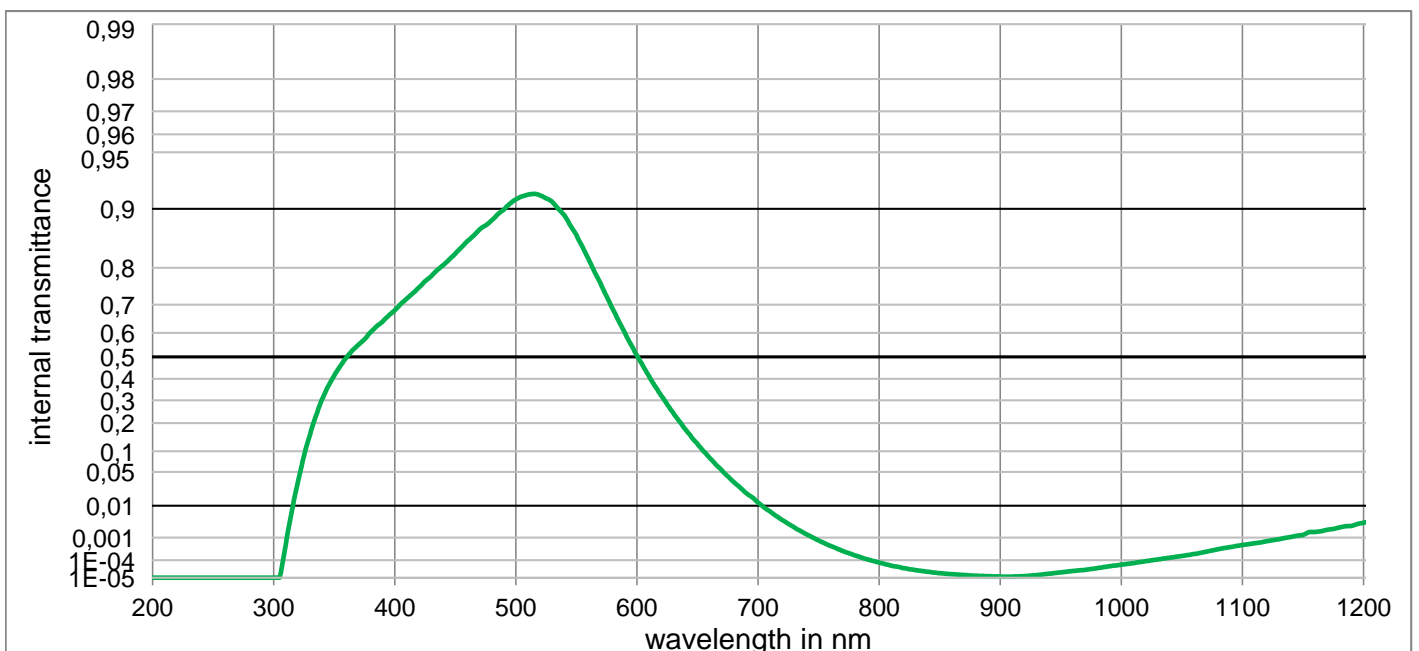
Mechanical properties	
Reference thickness	
$d = 1,00 \text{ mm}$	
Density	
$\rho = 2,68 \text{ g/cm}^3$	
Knoop hardness	
HK[0.1/20] = 462	

Thermal properties	
Transformation temperature	
$T_g = 457 \text{ }^\circ\text{C}$	
Thermal expansion in $10^{-6}/\text{K}$	
α (-30°C/+70°C)	= 7,4
α (20°C/300°C)	= 8,9

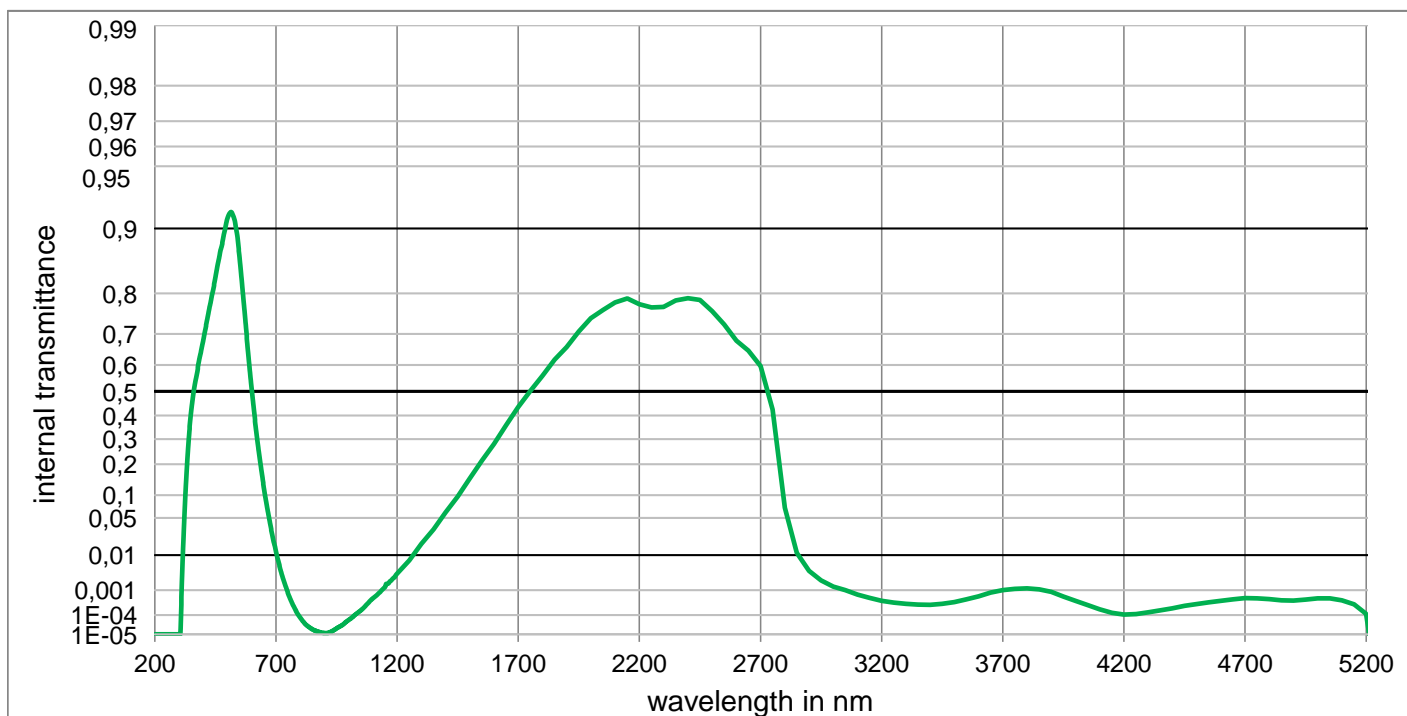
Chemical properties	
Chemical resistance	
FR class	= 0
SR class	= 2
AR class	= 2
Resistance against humidity	
Sensitive glass	
see pocket catalogue "Optical Filter Glass 2020", chapter 5.5	

Colormetric properties				
		1 mm	2 mm	3 mm
Illuminant D65	x	0,255	0,225	0,206
	y	0,335	0,340	0,346
	Y	67,6	54,2	45,1
	λ_d	493 nm	493 nm	493 nm
	P_e	0,205	0,312	0,376
Illuminant A	x	0,361	0,309	0,275
	y	0,441	0,459	0,472
	Y	60,8	46,0	36,7
	λ_d	502 nm	501 nm	501 nm
	P_e	0,197	0,315	0,392

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	9,109E-01	800	7,603E-05	1100	5,023E-04	2200	7,765E-01	3700	1,000E-03
210	< 1,0E-05	510	9,159E-01	810	5,164E-05	1110	5,957E-04	2250	7,690E-01	3750	1,117E-03
220	< 1,0E-05	520	9,150E-01	820	3,784E-05	1120	7,145E-04	2300	7,700E-01	3800	1,156E-03
230	< 1,0E-05	530	9,081E-01	830	2,904E-05	1130	8,591E-04	2350	7,849E-01	3850	1,072E-03
240	< 1,0E-05	540	8,920E-01	840	2,323E-05	1140	1,056E-03	2400	7,900E-01	3900	8,650E-04
250	< 1,0E-05	550	8,630E-01	850	1,907E-05	1150	1,260E-03	2450	7,858E-01	3950	5,821E-04
260	< 1,0E-05	560	8,190E-01	860	1,661E-05	1160	1,624E-03	2500	7,600E-01	4000	4,000E-04
270	< 1,0E-05	570	7,610E-01	870	1,474E-05	1170	1,940E-03	2550	7,263E-01	4050	2,735E-04
280	< 1,0E-05	580	6,860E-01	880	1,331E-05	1180	2,299E-03	2600	6,800E-01	4100	1,803E-04
290	< 1,0E-05	590	6,000E-01	890	1,245E-05	1190	2,572E-03	2650	6,484E-01	4150	1,256E-04
300	< 1,0E-05	600	5,060E-01	900	1,188E-05	1200	3,303E-03	2700	5,956E-01	4200	1,064E-04
310	5,6E-04	610	4,110E-01	910	1,184E-05	1250	7,500E-03	2750	4,255E-01	4250	1,102E-04
320	3,300E-02	620	3,220E-01	920	1,265E-05	1300	1,760E-02	2800	7,000E-02	4300	1,327E-04
330	1,560E-01	630	2,420E-01	930	1,465E-05	1350	3,270E-02	2850	1,117E-02	4350	1,614E-04
340	3,050E-01	640	1,750E-01	940	1,771E-05	1400	6,000E-02	2900	4,000E-03	4400	2,000E-04
350	4,160E-01	650	1,220E-01	950	2,149E-05	1450	9,630E-02	2950	2,113E-03	4450	2,553E-04
360	4,970E-01	660	8,200E-02	960	2,560E-05	1500	1,500E-01	3000	1,318E-03	4500	2,972E-04
370	5,520E-01	670	5,300E-02	970	3,000E-05	1550	2,136E-01	3050	1,000E-03	4550	3,508E-04
380	6,030E-01	680	3,300E-02	980	3,747E-05	1600	2,800E-01	3100	7,000E-04	4600	4,000E-04
390	6,430E-01	690	1,992E-02	990	4,756E-05	1650	3,594E-01	3150	5,248E-04	4650	4,667E-04
400	6,820E-01	700	1,200E-02	1000	5,807E-05	1700	4,356E-01	3200	4,000E-04	4700	5,140E-04
410	7,190E-01	710	6,990E-03	1010	7,070E-05	1750	5,018E-01	3250	3,412E-04	4750	5,000E-04
420	7,510E-01	720	4,000E-03	1020	8,810E-05	1800	5,600E-01	3300	3,097E-04	4800	4,699E-04
430	7,800E-01	730	2,294E-03	1030	1,098E-04	1850	6,191E-01	3350	2,871E-04	4850	4,266E-04
440	8,060E-01	740	1,333E-03	1040	1,337E-04	1900	6,600E-01	3400	2,793E-04	4900	4,169E-04
450	8,300E-01	750	7,750E-04	1050	1,622E-04	1950	7,070E-01	3450	3,034E-04	4950	4,477E-04
460	8,530E-01	760	4,570E-04	1060	2,000E-04	2000	7,430E-01	3500	3,606E-04	5000	5,000E-04
470	8,720E-01	770	2,754E-04	1070	2,573E-04	2050	7,631E-01	3550	4,634E-04	5050	5,000E-04
480	8,850E-01	780	1,734E-04	1080	3,317E-04	2100	7,807E-01	3600	6,000E-04	5100	4,198E-04
490	8,991E-01	790	1,109E-04	1090	4,133E-04	2150	7,891E-01	3650	8,185E-04	5150	2,931E-04