

BG55

Optical properties	
Reflection factor	
$P_d = 0,914$	
Spectral values guaranteed	
τ_i (405 nm)	$\geq 0,76$
τ_i (514 nm)	$\geq 0,93$
τ_i (633 nm)	$\geq 0,18$
τ_i (694 nm)	$\leq 0,016$
τ_i (1060 nm)	$\leq 0,0005$
Refractive indices	
n_F (486 nm)	= 1,55
n_e (546 nm)	= 1,54
n_d (587,6 nm)	= 1,54
Sellmeier coefficients	
valid from 400 nm to 1550 nm	
B_1	1,3373
B_2	0,0002
B_3	0,8117
C_1	9,095E-03 μm^2
C_2	1,4952E-02 μm^2
C_3	100,000 μm^2
Internal quality	
Bubble class	2

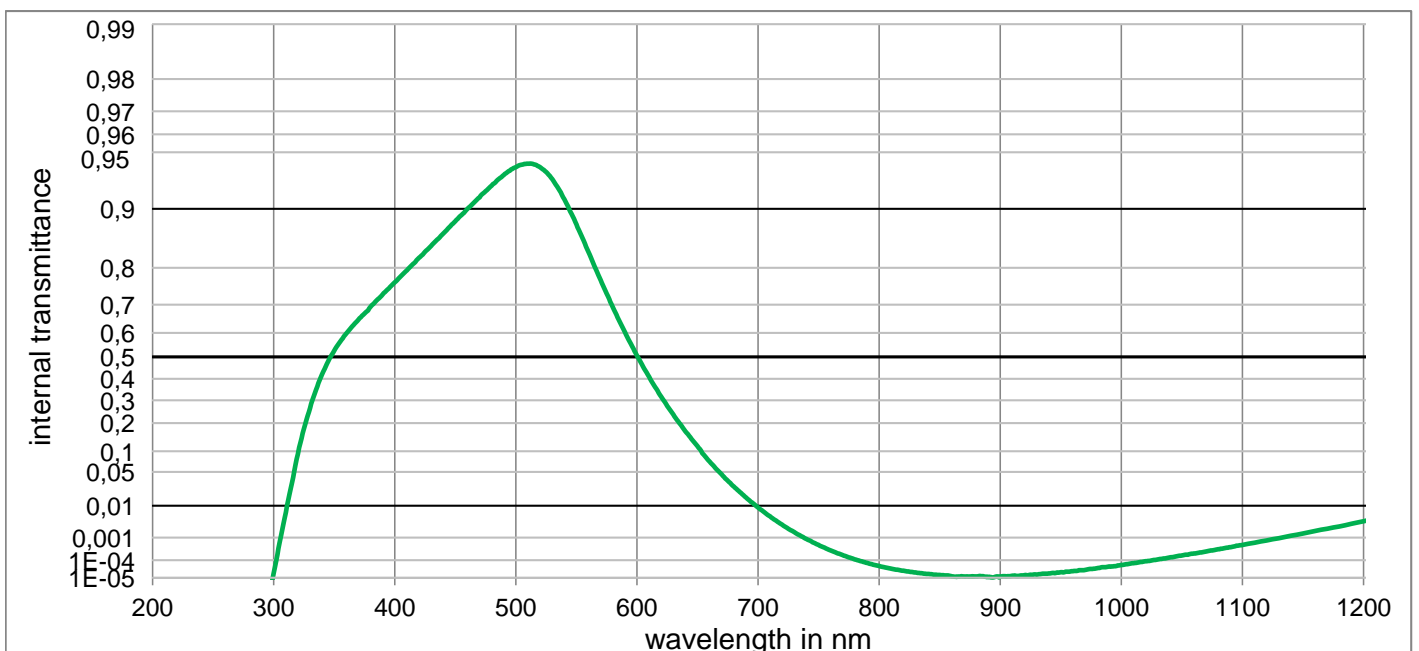
Mechanical properties	
Reference thickness	
$d = 1,00 \text{ mm}$	
Density	
$\rho = 2,65 \text{ g/cm}^3$	
Knoop hardness	
HK[0.1/20] = 504	

Thermal properties	
Transformation temperature	
$T_g = 453 \text{ }^\circ\text{C}$	
Thermal expansion in $10^{-6}/\text{K}$	
α (-30 $^\circ\text{C}/+70^\circ\text{C}$)	= 7,2
α (20 $^\circ\text{C}/300^\circ\text{C}$)	= 9,1

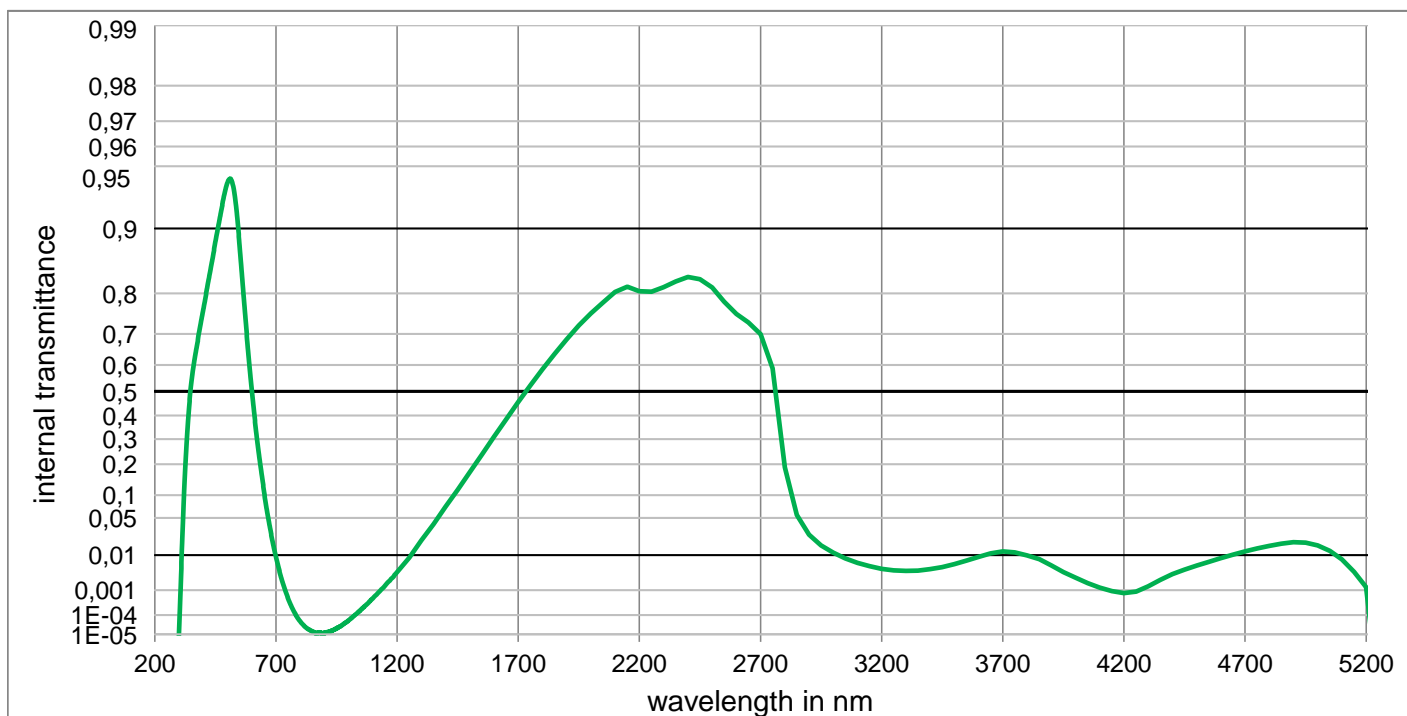
Chemical properties	
Chemical resistance	
FR class	= 0
SR class	= 2
AR class	= 2
Resistance against humidity	
Sensitive glass	
see pocket catalogue "Optical Filter Glass 2020", chapter 5.5	

Colormetric properties				
		1 mm	2 mm	3 mm
Illuminant D65	x	0,252	0,220	0,201
	y	0,329	0,328	0,328
	Y	68,9	56,6	48,2
	λ_d	492 nm	491 nm	491 nm
	P_e	0,223	0,339	0,409
Illuminant A	x	0,356	0,302	0,267
	y	0,438	0,452	0,460
	Y	61,7	47,6	39,0
	λ_d	501 nm	500 nm	500 nm
	P_e	0,208	0,331	0,413

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	9,399E-01	800	4,932E-05	1100	5,070E-04	2200	8,044E-01	3700	1,209E-02
210	< 1,0E-05	510	9,424E-01	810	3,514E-05	1110	6,338E-04	2250	8,032E-01	3750	1,149E-02
220	< 1,0E-05	520	9,400E-01	820	2,670E-05	1120	7,650E-04	2300	8,123E-01	3800	9,901E-03
230	< 1,0E-05	530	9,303E-01	830	2,088E-05	1130	9,376E-04	2350	8,232E-01	3850	8,076E-03
240	< 1,0E-05	540	9,110E-01	840	1,720E-05	1140	1,165E-03	2400	8,313E-01	3900	5,598E-03
250	< 1,0E-05	550	8,792E-01	850	1,489E-05	1150	1,429E-03	2450	8,272E-01	3950	3,651E-03
260	< 1,0E-05	560	8,329E-01	860	1,194E-05	1160	1,739E-03	2500	8,119E-01	4000	2,558E-03
270	< 1,0E-05	570	7,701E-01	870	1,204E-05	1170	2,078E-03	2550	7,821E-01	4050	1,710E-03
280	< 1,0E-05	580	6,928E-01	880	1,213E-05	1180	2,505E-03	2600	7,532E-01	4100	1,227E-03
290	< 1,0E-05	590	6,029E-01	890	1,174E-05	1190	3,047E-03	2650	7,316E-01	4150	9,269E-04
300	1,9E-05	600	5,057E-01	900	1,213E-05	1200	3,660E-03	2700	6,993E-01	4200	7,882E-04
310	6,7E-03	610	4,085E-01	910	1,337E-05	1250	8,670E-03	2750	5,881E-01	4250	8,827E-04
320	9,213E-02	620	3,166E-01	920	1,442E-05	1300	2,062E-02	2800	1,888E-01	4300	1,344E-03
330	2,650E-01	630	2,354E-01	930	1,549E-05	1350	4,003E-02	2850	5,554E-02	4350	2,158E-03
340	4,212E-01	640	1,677E-01	940	1,815E-05	1400	7,197E-02	2900	2,645E-02	4400	3,245E-03
350	5,277E-01	650	1,149E-01	950	2,216E-05	1450	1,148E-01	2950	1,629E-02	4450	4,293E-03
360	5,980E-01	660	7,208E-02	960	2,501E-05	1500	1,710E-01	3000	1,137E-02	4500	5,522E-03
370	6,500E-01	670	4,508E-02	970	2,982E-05	1550	2,371E-01	3050	8,398E-03	4550	6,840E-03
380	6,932E-01	680	2,711E-02	980	3,763E-05	1600	3,093E-01	3100	6,519E-03	4600	8,465E-03
390	7,313E-01	690	1,583E-02	990	4,603E-05	1650	3,844E-01	3150	5,315E-03	4650	1,031E-02
400	7,648E-01	700	9,032E-03	1000	5,649E-05	1700	4,561E-01	3200	4,538E-03	4700	1,220E-02
410	7,945E-01	710	5,056E-03	1010	6,997E-05	1750	5,236E-01	3250	4,113E-03	4750	1,406E-02
420	8,214E-01	720	2,809E-03	1020	8,815E-05	1800	5,841E-01	3300	3,971E-03	4800	1,587E-02
430	8,447E-01	730	1,576E-03	1030	1,083E-04	1850	6,379E-01	3350	4,064E-03	4850	1,775E-02
440	8,657E-01	740	8,774E-04	1040	1,382E-04	1900	6,841E-01	3400	4,457E-03	4900	1,892E-02
450	8,842E-01	750	5,024E-04	1050	1,697E-04	1950	7,241E-01	3450	5,018E-03	4950	1,854E-02
460	8,999E-01	760	2,940E-04	1060	2,108E-04	2000	7,545E-01	3500	6,034E-03	5000	1,629E-02
470	9,131E-01	770	1,762E-04	1070	2,661E-04	2050	7,807E-01	3550	7,359E-03	5050	1,249E-02
480	9,246E-01	780	1,098E-04	1080	3,291E-04	2100	8,029E-01	3600	9,128E-03	5100	7,925E-03
490	9,338E-01	790	7,172E-05	1090	4,099E-04	2150	8,131E-01	3650	1,095E-02	5150	3,751E-03