

## BG3

Optical properties	
Reflection factor	
$P_d = 0,921$	
Spectral values guaranteed	
$\tau_i$ (365 nm)	$\geq 0,94$
$\tau_i$ (633 nm)	$\leq 0,00005$
Refractive indices	
$n_F$ (486 nm)	= 1,516
$n_e$ (546 nm)	= 1,512
$n_d$ (587,6 nm)	= 1,51
Sellmeier coefficients	
valid from 300 nm to 1600 nm	
$B_1$	0,8735
$B_2$	0,3716
$B_3$	1,1076
$C_1$	9,390E-03 $\mu\text{m}^2$
$C_2$	1,0998E-02 $\mu\text{m}^2$
$C_3$	145,898 $\mu\text{m}^2$
Internal quality	
Bubble class	1

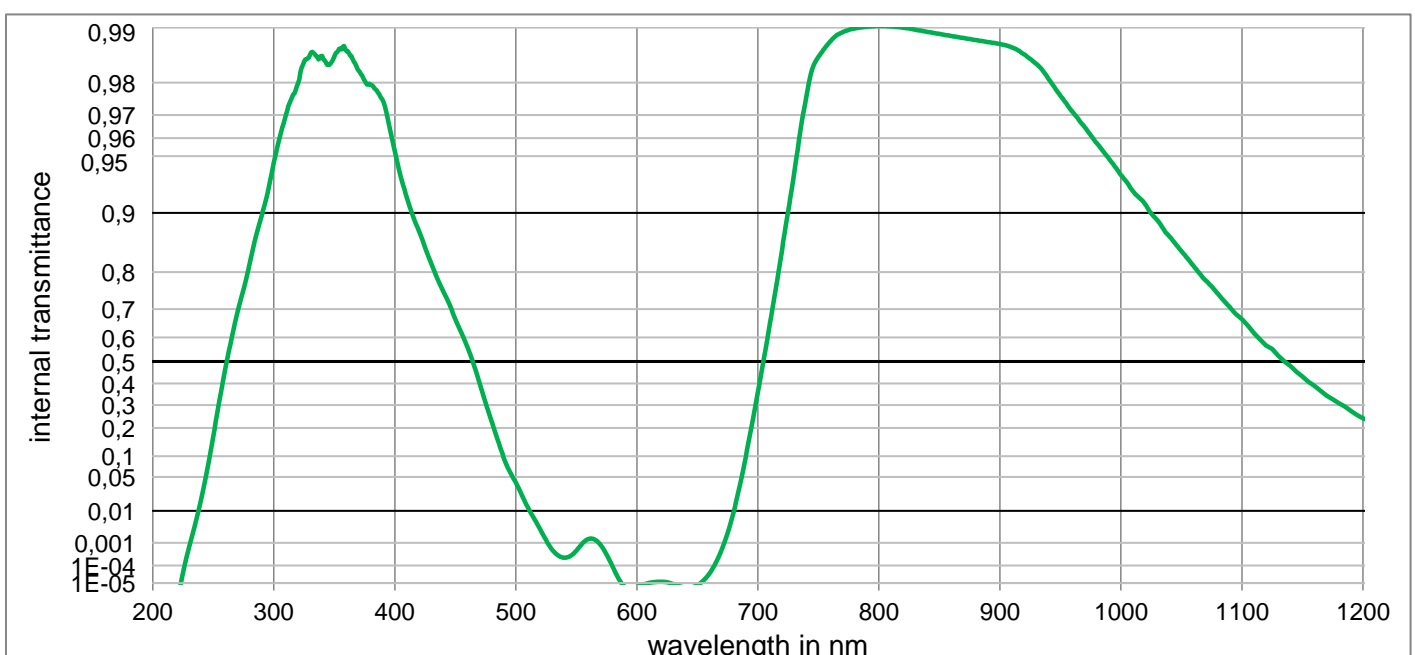
Mechanical properties	
Reference thickness	
$d = 1,00$ mm	
Density	
$\rho = 2,55$ g/cm <sup>3</sup>	
Knoop hardness	
HK[0.1/20] = 438	

Thermal properties	
Transformation temperature	
$T_g = 478$ °C	
Thermal expansion in $10^{-6}/\text{K}$	
$\alpha$ (-30°C/+70°C)	= 8,8
$\alpha$ (20°C/300°C)	= 10,1

Chemical properties	
Chemical resistance	
FR class	= 0
SR class	= 1
AR class	= 1
Resistance against humidity	
Sensitive glass	
see pocket catalogue "Optical Filter Glass 2024", chapter 5.5	

Colormetric properties				
	1 mm	2 mm	3 mm	
Illuminant D65	x	0,154	0,160	0,163
	y	0,029	0,018	0,014
	Y	2,0	0,8	0,5
	$\lambda_d$	455 nm	448 nm	444 nm
	$P_e$	0,979	0,993	0,996
Illuminant A	x	0,160	0,166	0,170
	y	0,042	0,024	0,020
	Y	0,9	0,3	0,2
	$\lambda_d$	458 nm	447 nm	440 nm
$P_e$	0,958	0,977	0,978	

Notes	
<b>UV</b>	Transmission changes are possible under the action of intense ultraviolet radiation.
Ionically colored glass	
Bandpass filter / Shortpass filter	
ISO 23364:2021	
Disclaimer	
All data without tolerances are to be understood to be reference values.	



## BG3



**Internal transmittance  $\tau_i$  at reference thickness**  
 The internal transmittance values, tabulated and graphically represented, are reference values only

$\lambda$ /nm	$\tau_i$	$\lambda$ /nm	$\tau_i$	$\lambda$ /nm	$\tau_i$	$\lambda$ /nm	$\tau_i$	$\lambda$ /nm	$\tau_i$	$\lambda$ /nm	$\tau_i$
200	< 1,000E-05	500	4,007E-02	800	9,902E-01	1100	6,665E-01	2200	6,200E-01	3700	4,038E-01
210	< 1,000E-05	510	1,201E-02	810	9,901E-01	1110	6,152E-01	2250	6,566E-01	3750	4,132E-01
220	< 1,000E-05	520	2,977E-03	820	9,900E-01	1120	5,680E-01	2300	7,009E-01	3800	4,226E-01
230	6,761E-04	530	5,426E-04	830	9,897E-01	1130	5,247E-01	2350	7,349E-01	3850	4,330E-01
240	1,924E-02	540	2,394E-04	840	9,895E-01	1140	4,800E-01	2400	7,538E-01	3900	4,462E-01
250	1,690E-01	550	4,902E-04	850	9,892E-01	1150	4,319E-01	2450	7,642E-01	3950	4,557E-01
260	4,698E-01	560	1,401E-03	860	9,889E-01	1160	3,884E-01	2500	7,651E-01	4000	4,600E-01
270	6,903E-01	570	8,404E-04	870	9,886E-01	1170	3,432E-01	2550	7,613E-01	4050	4,557E-01
280	8,188E-01	580	8,776E-05	880	9,883E-01	1180	3,081E-01	2600	7,557E-01	4100	4,400E-01
290	8,972E-01	590	< 1,000E-05	890	9,880E-01	1190	2,727E-01	2650	7,434E-01	4150	4,170E-01
300	9,457E-01	600	< 1,000E-05	900	9,877E-01	1200	2,412E-01	2700	7,236E-01	4200	3,915E-01
310	9,700E-01	610	1,013E-05	910	9,872E-01	1250	1,462E-01	2750	6,443E-01	4250	3,670E-01
320	9,798E-01	620	1,227E-05	920	9,860E-01	1300	1,200E-01	2800	5,868E-01	4300	3,368E-01
330	9,859E-01	630	< 1,000E-05	930	9,842E-01	1350	1,406E-01	2850	5,764E-01	4350	2,925E-01
340	9,857E-01	640	< 1,000E-05	940	9,810E-01	1400	1,500E-01	2900	5,717E-01	4400	2,500E-01
350	9,856E-01	650	< 1,000E-05	950	9,764E-01	1450	1,179E-01	2950	5,698E-01	4450	2,000E-01
360	9,865E-01	660	3,783E-05	960	9,712E-01	1500	1,000E-01	3000	5,623E-01	4500	1,600E-01
370	9,829E-01	670	5,207E-04	970	9,651E-01	1550	1,000E-01	3050	5,481E-01	4550	1,132E-01
380	9,794E-01	680	9,561E-03	980	9,574E-01	1600	1,236E-01	3100	5,264E-01	4600	7,780E-02
390	9,750E-01	690	9,566E-02	990	9,484E-01	1650	1,406E-01	3150	5,066E-01	4650	5,610E-02
400	9,527E-01	700	3,590E-01	1000	9,369E-01	1700	1,400E-01	3200	4,840E-01	4700	4,159E-02
410	9,169E-01	710	6,550E-01	1010	9,230E-01	1750	1,330E-01	3250	4,632E-01	4750	3,483E-02
420	8,758E-01	720	8,460E-01	1020	9,099E-01	1800	1,443E-01	3300	4,443E-01	4800	3,170E-02
430	8,192E-01	730	9,380E-01	1030	8,909E-01	1850	1,849E-01	3350	4,274E-01	4850	3,076E-02
440	7,520E-01	740	9,760E-01	1040	8,680E-01	1900	2,500E-01	3400	4,100E-01	4900	2,729E-02
450	6,672E-01	750	9,856E-01	1050	8,428E-01	1950	3,283E-01	3450	3,981E-01	4950	2,004E-02
460	5,617E-01	760	9,881E-01	1060	8,133E-01	2000	4,000E-01	3500	3,915E-01	5000	1,099E-02
470	4,022E-01	770	9,894E-01	1070	7,800E-01	2050	4,623E-01	3550	3,896E-01	5050	5,082E-03
480	2,258E-01	780	9,899E-01	1080	7,463E-01	2100	5,200E-01	3600	3,915E-01	5100	2,032E-03
490	9,487E-02	790	9,901E-01	1090	7,060E-01	2150	5,670E-01	3650	3,981E-01	5150	9,099E-04