

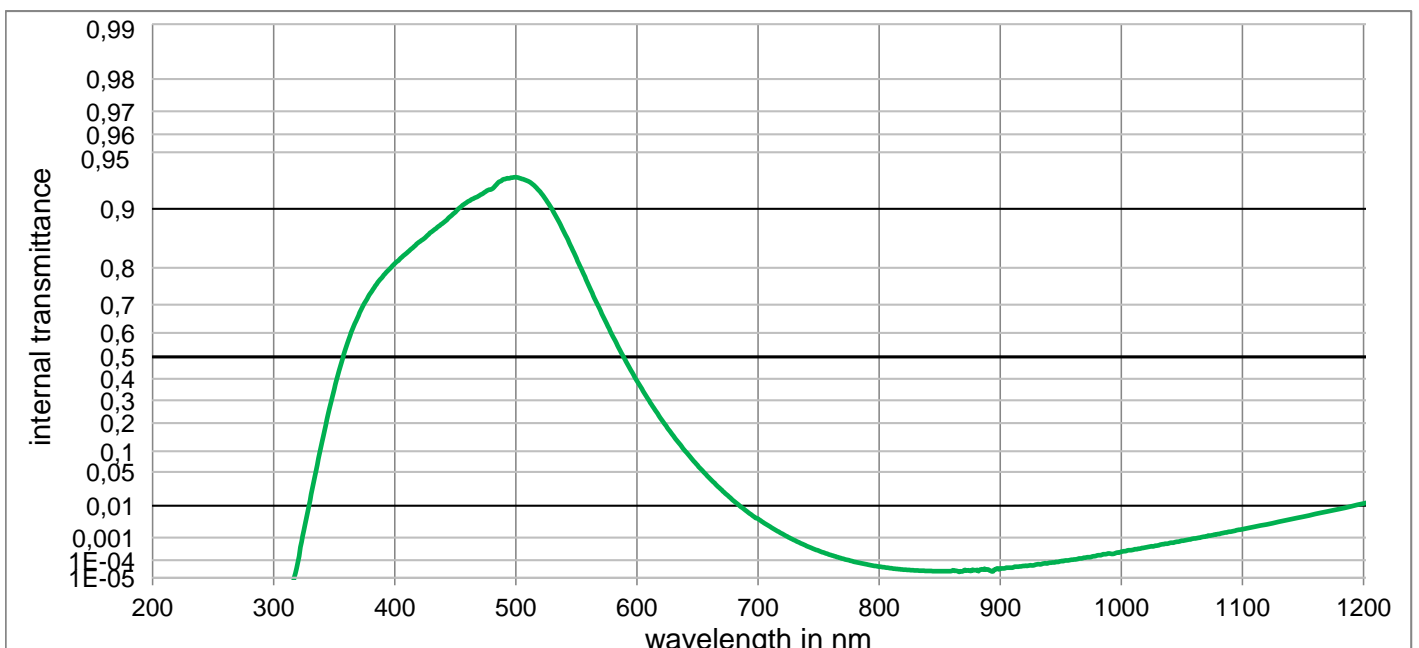
## BG60

Optical properties	
<b>Reflection factor</b>	
$P_d = 0,914$	
<b>Spectral values guaranteed</b>	
$\tau_i$ (405 nm)	$\geq 0,8$
$\tau_i$ (514 nm)	$\geq 0,91$
$\tau_i$ (633 nm)	$\geq 0,1$
$\tau_i$ (694 nm)	$\leq 0,008$
$\tau_i$ (1060 nm)	$\leq 0,0015$
<b>Refractive indices</b>	
$n_F$ (486 nm)	= 1,54
$n_e$ (546 nm)	= 1,54
$n_d$ (587,6 nm)	= 1,54
<b>Sellmeier coefficients</b>	
valid from 340 nm to 1550 nm	
$B_1$	1,3298
$B_2$	0,0004
$B_3$	2,5598
$C_1$	9,241E-03 $\mu\text{m}^2$
$C_2$	1,0918E-01 $\mu\text{m}^2$
$C_3$	450,591 $\mu\text{m}^2$
<b>Internal quality</b>	
Bubble class	2

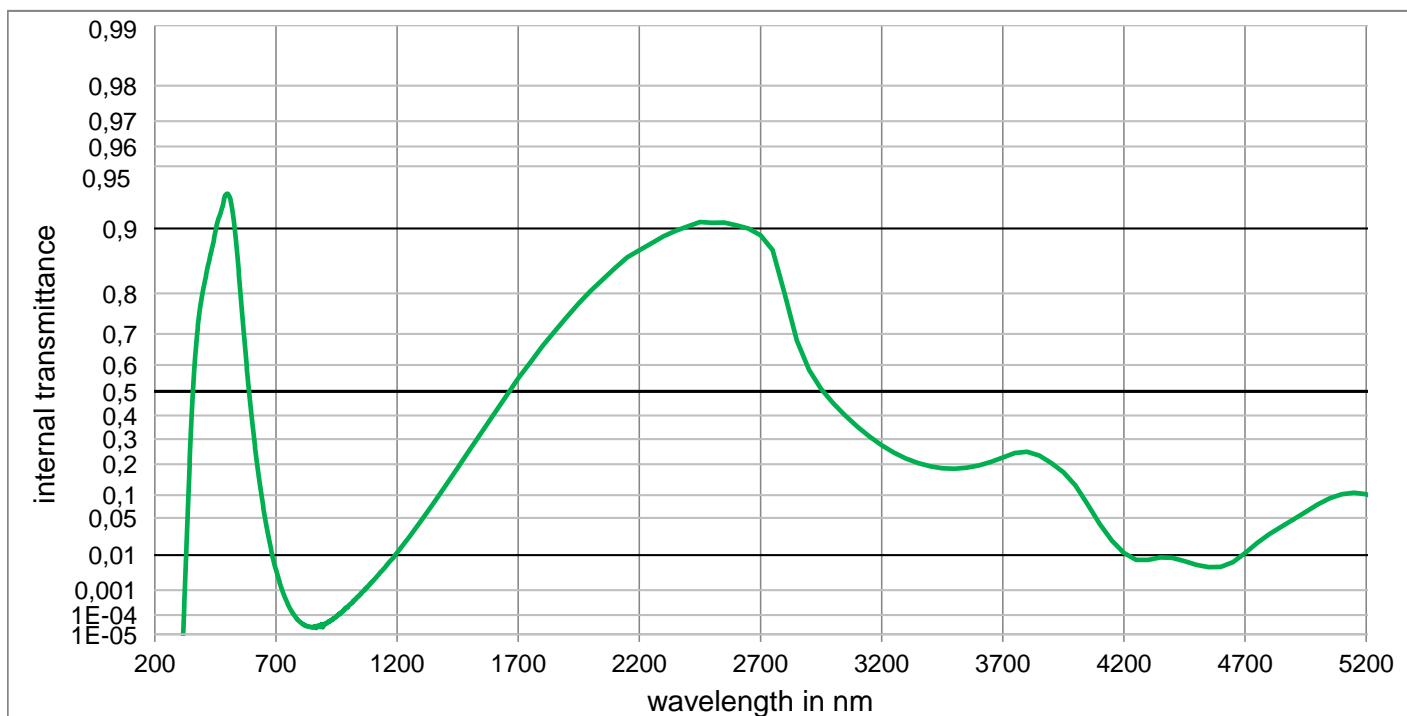
Mechanical properties	
<b>Reference thickness</b>	
$d = 1,00 \text{ mm}$	
<b>Density</b>	
$\rho = 2,83 \text{ g/cm}^3$	
<b>Knoop hardness</b>	
HK[0.1/20] = 362	
<b>Thermal properties</b>	
<b>Transformation temperature</b>	
$T_g = 411 \text{ }^\circ\text{C}$	
<b>Thermal expansion in <math>10^{-6}/\text{K}</math></b>	
$\alpha$ (-30 $^\circ\text{C}/+70^\circ\text{C}$ )	= 12,0
$\alpha$ (20 $^\circ\text{C}/300^\circ\text{C}$ )	= 13,9
<b>Chemical properties</b>	
<b>Chemical resistance</b>	
FR class	= 1
SR class	= 52.3
AR class	= 3.3
<b>Resistance against humidity</b>	
Resistant glass	
see pocket catalogue "Optical Filter Glass 2020", chapter 5.5	

Colorimetric properties				
		1 mm	2 mm	3 mm
Illuminant D65	x	0,236	0,201	0,181
	y	0,318	0,306	0,297
	Y	63,8	49,9	41,0
	$\lambda_d$	490 nm	489 nm	489 nm
	$P_e$	0,286	0,425	0,506
Illuminant A	x	0,334	0,271	0,232
	y	0,436	0,441	0,437
	Y	55,7	40,5	31,7
	$\lambda_d$	499 nm	498 nm	497 nm
	$P_e$	0,259	0,406	0,498

Notes	
Ionically colored glass	
Bandpass filter / Shortpass filter	
NIR cutoff filter	
$\lambda_{50\%}(d=0.3\text{mm}) = 633 \text{ nm}$	
DIN 58131	
<b>Disclaimer</b>	
All data without tolerances are to be understood to be reference values.	



## BG60



**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	< 1,0E-05	500	9,319E-01	800	4,553E-05	1100	1,992E-03	2200	8,733E-01	3700	2,259E-01
210	< 1,0E-05	510	9,286E-01	810	3,683E-05	1110	2,416E-03	2250	8,825E-01	3750	2,432E-01
220	< 1,0E-05	520	9,187E-01	820	3,115E-05	1120	2,902E-03	2300	8,910E-01	3800	2,484E-01
230	< 1,0E-05	530	8,991E-01	830	2,752E-05	1130	3,528E-03	2350	8,974E-01	3850	2,331E-01
240	< 1,0E-05	540	8,673E-01	840	2,593E-05	1140	4,192E-03	2400	9,023E-01	3900	2,041E-01
250	< 1,0E-05	550	8,208E-01	850	2,497E-05	1150	4,976E-03	2450	9,069E-01	3950	1,707E-01
260	< 1,0E-05	560	7,573E-01	860	2,632E-05	1160	5,967E-03	2500	9,061E-01	4000	1,275E-01
270	< 1,0E-05	570	6,790E-01	870	2,877E-05	1170	7,049E-03	2550	9,064E-01	4050	7,682E-02
280	< 1,0E-05	580	5,874E-01	880	2,856E-05	1180	8,166E-03	2600	9,035E-01	4100	4,036E-02
290	< 1,0E-05	590	4,892E-01	890	3,182E-05	1190	9,653E-03	2650	9,000E-01	4150	2,037E-02
300	< 1,0E-05	600	3,905E-01	900	3,559E-05	1200	1,142E-02	2700	8,923E-01	4200	1,121E-02
310	< 1,0E-05	610	2,979E-01	910	3,967E-05	1250	2,400E-02	2750	8,737E-01	4250	7,748E-03
320	7,831E-05	620	2,168E-01	920	4,945E-05	1300	4,588E-02	2800	7,977E-01	4300	7,701E-03
330	1,360E-02	630	1,505E-01	930	5,977E-05	1350	7,977E-02	2850	6,805E-01	4350	8,815E-03
340	1,301E-01	640	1,000E-01	940	7,197E-05	1400	1,268E-01	2900	5,825E-01	4400	8,635E-03
350	3,524E-01	650	6,356E-02	950	8,963E-05	1450	1,867E-01	2950	5,097E-01	4450	7,195E-03
360	5,453E-01	660	3,882E-02	960	1,064E-04	1500	2,557E-01	3000	4,513E-01	4500	5,756E-03
370	6,642E-01	670	2,294E-02	970	1,346E-04	1550	3,305E-01	3050	3,996E-01	4550	4,996E-03
380	7,356E-01	680	1,314E-02	980	1,709E-04	1600	4,056E-01	3100	3,524E-01	4600	5,132E-03
390	7,795E-01	690	7,409E-03	990	2,146E-04	1650	4,814E-01	3150	3,104E-01	4650	6,813E-03
400	8,093E-01	700	4,338E-03	1000	2,576E-04	1700	5,511E-01	3200	2,744E-01	4700	1,106E-02
410	8,314E-01	710	2,421E-03	1010	3,170E-04	1750	6,093E-01	3250	2,449E-01	4750	1,826E-02
420	8,515E-01	720	1,378E-03	1020	3,967E-04	1800	6,632E-01	3300	2,218E-01	4800	2,702E-02
430	8,678E-01	730	7,905E-04	1030	4,818E-04	1850	7,071E-01	3350	2,043E-01	4850	3,642E-02
440	8,817E-01	740	4,644E-04	1040	6,148E-04	1900	7,456E-01	3400	1,921E-01	4900	4,731E-02
450	8,959E-01	750	2,818E-04	1050	7,502E-04	1950	7,786E-01	3450	1,852E-01	4950	6,127E-02
460	9,080E-01	760	1,794E-04	1060	9,159E-04	2000	8,056E-01	3500	1,834E-01	5000	7,711E-02
470	9,150E-01	770	1,187E-04	1070	1,118E-03	2050	8,274E-01	3550	1,867E-01	5050	9,209E-02
480	9,214E-01	780	8,223E-05	1080	1,357E-03	2100	8,467E-01	3600	1,950E-01	5100	1,029E-01
490	9,303E-01	790	6,013E-05	1090	1,655E-03	2150	8,632E-01	3650	2,082E-01	5150	1,065E-01