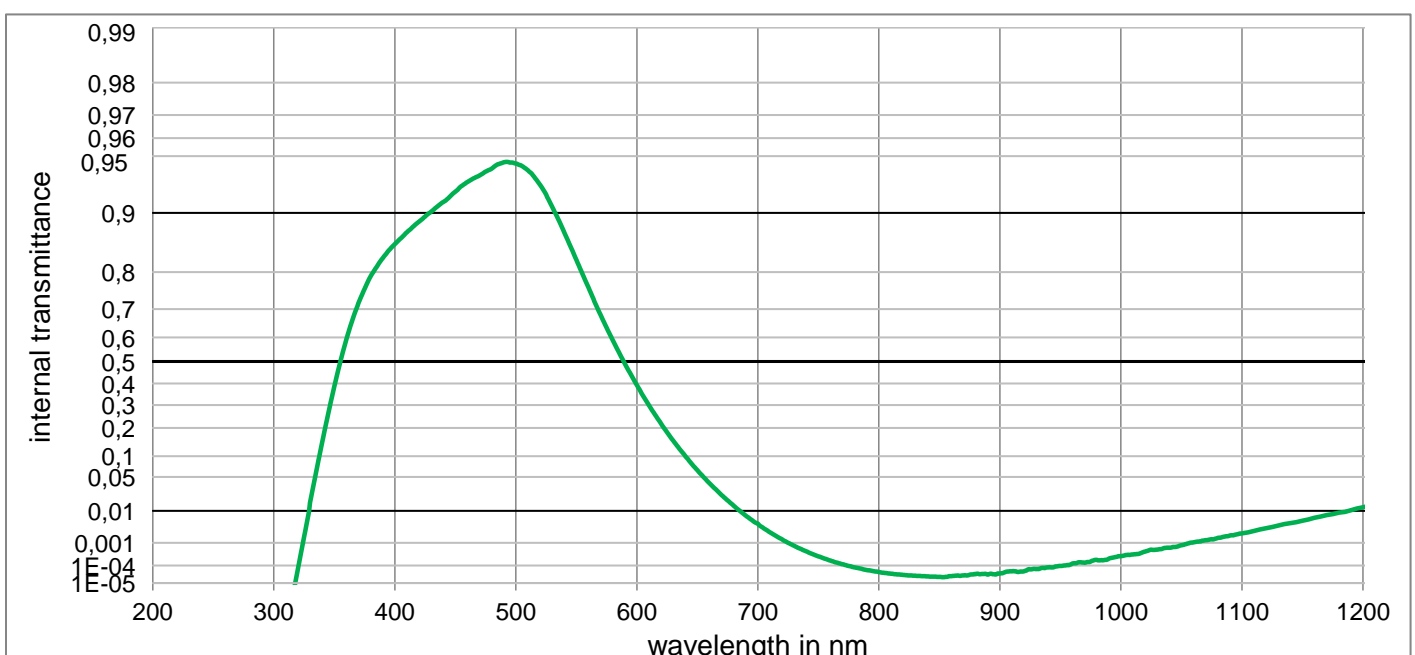
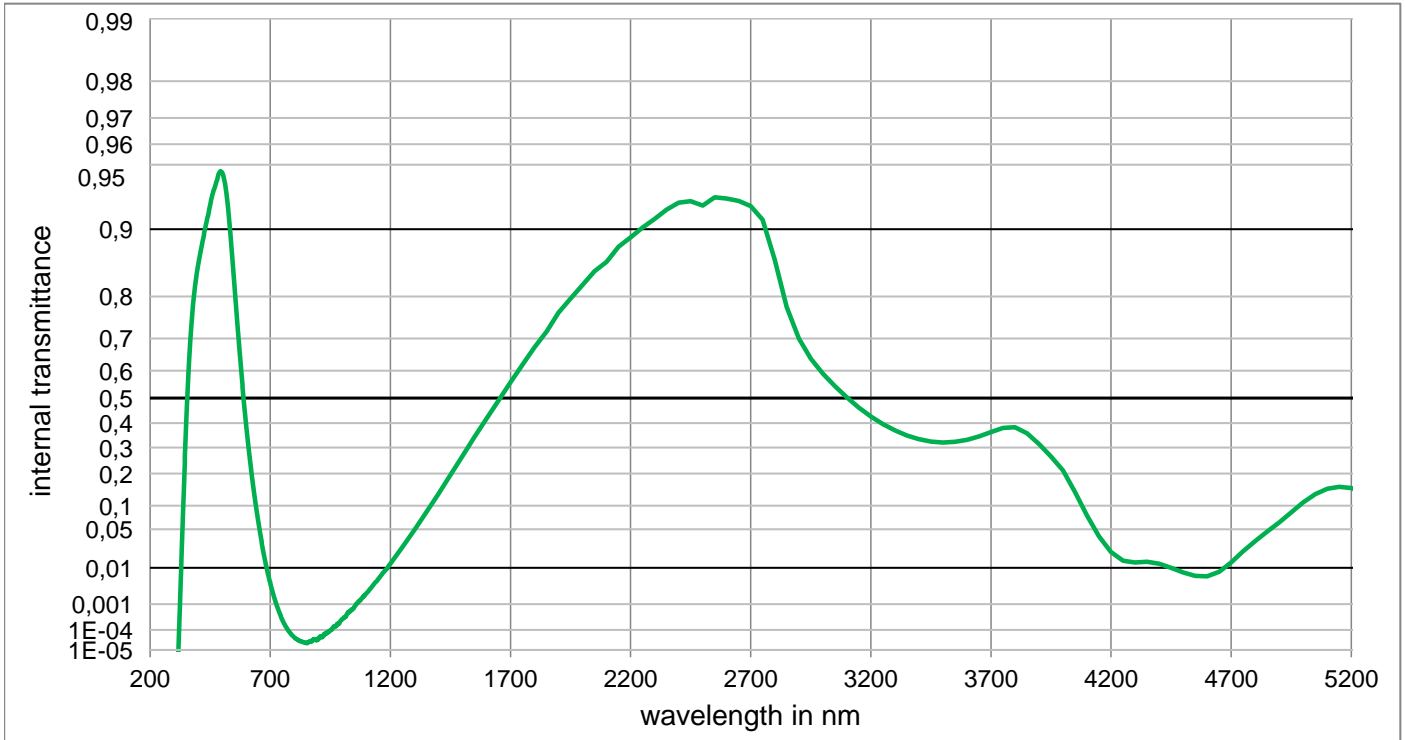


## BG60HT

Optical properties		Mechanical properties		Colorimetric properties					
<b>Reflection factor</b>		<b>Reference thickness</b>		1 mm		2 mm		3 mm	
$P_d = 0,914$		$d = 1,00 \text{ mm}$		Illuminant D65	x	0,233	0,198	0,178	
<b>Spectral values guaranteed</b>		<b>Density</b>			y	0,315	0,300		0,287
$\tau_i (405 \text{ nm}) \geq 0,85$	$\rho = 2,83 \text{ g/cm}^3$		Y		64,1	50,6		42,0	
$\tau_i (514 \text{ nm}) \geq 0,93$	<b>Knoop hardness</b>		$\lambda_d$		489 nm	488 nm		488 nm	
$\tau_i (633 \text{ nm}) \geq 0,1$	$HK[0.1/20] = 362$		$P_e$		0,300	0,442		0,525	
$\tau_i (694 \text{ nm}) \leq 0,008$	<b>Thermal properties</b>		Illuminant A	x	0,330	0,266		0,227	
$\tau_i (1060 \text{ nm}) \leq 0,0015$	<b>Transformation temperature</b>			y	0,435	0,436		0,429	
	$T_g = 411 \text{ }^\circ\text{C}$			Y	55,7	40,8		32,2	
	<b>Thermal expansion in</b> $10^{-6}/\text{K}$			$\lambda_d$	499 nm	498 nm		496 nm	
	$\alpha_{(-30^\circ\text{C}/+70^\circ\text{C})} = 12,0$			$P_e$	0,270	0,421		0,514	
	$\alpha_{(20^\circ\text{C}/300^\circ\text{C})} = 13,9$		<b>Notes</b>						
<b>Refractive indices</b>		<b>Chemical properties</b>		Ionically colored glass					
$n_F (486 \text{ nm}) = 1,544$	<b>Chemical resistance</b>		Bandpass filter / Shortpass filter						
$n_e (546 \text{ nm}) = 1,54$	FR class = 1		NIR cutoff filter						
$n_d (587,6 \text{ nm}) = 1,538$	SR class = 52.2		$\lambda_{50\%}(d=0.3\text{mm}) = 633 \text{ nm}$						
	AR class = 3.2		ISO 23364:2021						
<b>Sellmeier coefficients</b>		<b>Resistance against humidity</b>		<b>Disclaimer</b>					
valid from 340 nm to 1550 nm				All data without tolerances are to be understood to be reference values.					
$B_1 = 1,3298$									
$B_2 = 0,0004$									
$B_3 = 2,5598$									
$C_1 = 9,241\text{E-}03 \text{ } \mu\text{m}^2$									
$C_2 = 1,0918\text{E-}01 \text{ } \mu\text{m}^2$									
$C_3 = 450,591 \text{ } \mu\text{m}^2$									
<b>Internal quality</b>									
Bubble class 2									



BG60HT



**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	9,452E-01	800	4,502E-05	1100	2,177E-03	2200	8,909E-01	3700	3,635E-01
210	< 1,000E-05	510	9,404E-01	810	3,656E-05	1110	2,626E-03	2250	9,019E-01	3750	3,805E-01
220	< 1,000E-05	520	9,288E-01	820	3,119E-05	1120	3,188E-03	2300	9,103E-01	3800	3,826E-01
230	< 1,000E-05	530	9,073E-01	830	2,793E-05	1130	3,874E-03	2350	9,188E-01	3850	3,583E-01
240	< 1,000E-05	540	8,739E-01	840	2,564E-05	1140	4,603E-03	2400	9,246E-01	3900	3,143E-01
250	< 1,000E-05	550	8,260E-01	850	2,372E-05	1150	5,383E-03	2450	9,257E-01	3950	2,645E-01
260	< 1,000E-05	560	7,618E-01	860	2,639E-05	1160	6,519E-03	2500	9,222E-01	4000	2,114E-01
270	< 1,000E-05	570	6,817E-01	870	2,872E-05	1170	7,711E-03	2550	9,288E-01	4050	1,384E-01
280	< 1,000E-05	580	5,900E-01	880	3,410E-05	1180	8,976E-03	2600	9,279E-01	4100	7,617E-02
290	< 1,000E-05	590	4,908E-01	890	3,233E-05	1190	1,032E-02	2650	9,261E-01	4150	3,905E-02
300	< 1,000E-05	600	3,920E-01	900	3,719E-05	1200	1,224E-02	2700	9,218E-01	4200	2,110E-02
310	< 1,000E-05	610	2,994E-01	910	5,030E-05	1250	2,586E-02	2750	9,096E-01	4250	1,416E-02
320	7,415E-05	620	2,184E-01	920	4,952E-05	1300	4,890E-02	2800	8,624E-01	4300	1,306E-02
330	1,574E-02	630	1,509E-01	930	6,534E-05	1350	8,439E-02	2850	7,781E-01	4350	1,346E-02
340	1,447E-01	640	1,002E-01	940	8,100E-05	1400	1,324E-01	2900	7,003E-01	4400	1,236E-02
350	3,866E-01	650	6,391E-02	950	9,477E-05	1450	1,953E-01	2950	6,400E-01	4450	9,979E-03
360	5,939E-01	660	3,912E-02	960	1,248E-04	1500	2,655E-01	3000	5,905E-01	4500	7,775E-03
370	7,185E-01	670	2,310E-02	970	1,384E-04	1550	3,426E-01	3050	5,454E-01	4550	6,476E-03
380	7,901E-01	680	1,336E-02	980	1,873E-04	1600	4,175E-01	3100	5,027E-01	4600	6,340E-03
390	8,295E-01	690	7,552E-03	990	2,146E-04	1650	4,899E-01	3150	4,626E-01	4650	8,118E-03
400	8,554E-01	700	4,483E-03	1000	2,823E-04	1700	5,594E-01	3200	4,268E-01	4700	1,303E-02
410	8,740E-01	710	2,369E-03	1010	3,353E-04	1750	6,200E-01	3250	3,957E-01	4750	2,161E-02
420	8,890E-01	720	1,335E-03	1020	4,468E-04	1800	6,742E-01	3300	3,700E-01	4800	3,292E-02
430	9,016E-01	730	7,666E-04	1030	5,325E-04	1850	7,188E-01	3350	3,495E-01	4850	4,615E-02
440	9,125E-01	740	4,521E-04	1040	6,468E-04	1900	7,658E-01	3400	3,339E-01	4900	6,232E-02
450	9,226E-01	750	2,747E-04	1050	8,132E-04	1950	7,954E-01	3450	3,245E-01	4950	8,366E-02
460	9,312E-01	760	1,741E-04	1060	1,044E-03	2000	8,219E-01	3500	3,205E-01	5000	1,085E-01
470	9,365E-01	770	1,155E-04	1070	1,248E-03	2050	8,448E-01	3550	3,231E-01	5050	1,318E-01
480	9,417E-01	780	8,046E-05	1080	1,509E-03	2100	8,596E-01	3600	3,311E-01	5100	1,485E-01
490	9,460E-01	790	5,856E-05	1090	1,833E-03	2150	8,797E-01	3650	3,451E-01	5150	1,548E-01