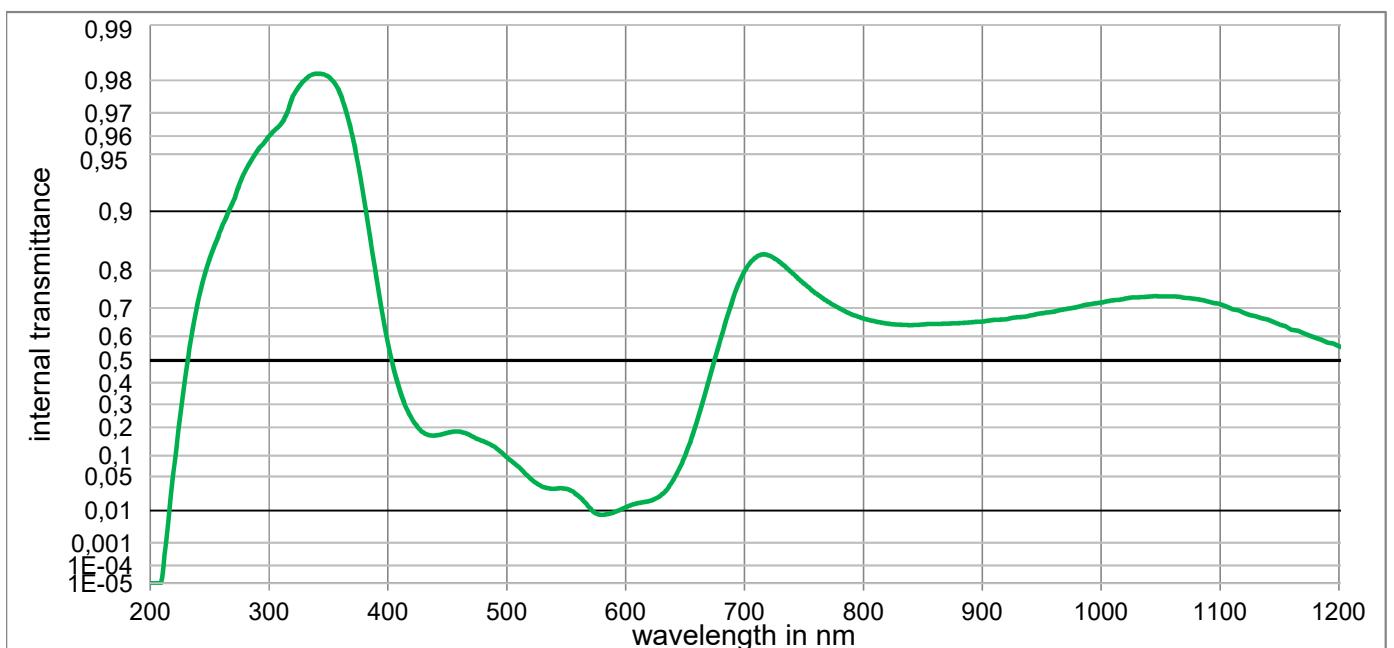


## UG5

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 y Y $\lambda_d$ $P_e$
<b>Spectral values guaranteed (d = 1 mm)</b>	<b>Density</b>	
$\lambda_c(\tau_i = 0,5) = \text{nm nm}$	$\rho = 2,85 \text{ g/cm}^3$	
$\lambda_s(\tau_{i,U} = ) = \text{nm}$	<b>Knoop hardness</b>	
$\lambda_p(\tau_{i,L} = ) = \text{nm}$	$HK_{[0.1/20]} = 407$	
$t_i (633 \text{ nm} \leq 0,05)$	<b>Thermal properties</b>	Illuminant A x y Y $\lambda_d$ $P_e$
$\tau_i (725 \text{ nm} \leq 0,85)$	<b>Transformation temperature</b>	
	$T_g = 462 \text{ }^\circ\text{C}$	
	<b>Thermal expansion in <math>10^{-6}/\text{K}</math></b>	
	$\alpha_{(-30^\circ\text{C}/+70^\circ\text{C})} = 8,1$	
<b>Refractive indices</b>	$\alpha_{(20^\circ\text{C}/300^\circ\text{C})} = 9,4$	<b>Notes</b>
$n_d (587,6 \text{ nm}) = 1,54$		<b>UV</b>
		Transmission changes are possible under the action of intense ultraviolet radiation.
$n_t (1014 \text{ nm}) = 1,53$		Ionically colored glass
<b>Sellmeier coefficients</b>	<b>Chemical properties</b>	Bandpass filter
valid from 270 nm to 600 nm	<b>Chemical resistance</b>	
$B_1 = 1,3960$	FR class = 0	
$B_2 = 0,0097$	SR class = 3	
$B_3 = 0,5658$	AR class = 2	DIN 58131
$C_1 = 9,230\text{E-}03 \text{ } \mu\text{m}^2$		
$C_2 = 4,4000\text{E-}02 \text{ } \mu\text{m}^2$	Long-term changes in the polished surface are possible.	<b>Disclaimer</b>
$C_3 = 96,000 \text{ } \mu\text{m}^2$		All data without tolerances are to be understood to be reference values
<b>Internal quality</b>		
Bubble class    2		



## UG5



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	9,500E-02	800	6,650E-01	1100	7,118E-01	2200	6,039E-01	3700	3,581E-04
210	2,2E-05	510	7,000E-02	810	6,550E-01	1110	6,962E-01	2250	5,992E-01	3750	4,036E-04
220	6,9E-02	520	4,600E-02	820	6,476E-01	1120	6,834E-01	2300	5,961E-01	3800	4,130E-04
230	4,5E-01	530	3,300E-02	830	6,436E-01	1130	6,725E-01	2350	6,000E-01	3850	3,873E-04
240	7,2E-01	540	3,041E-02	840	6,420E-01	1140	6,615E-01	2400	6,000E-01	3900	3,451E-04
250	8,3E-01	550	3,015E-02	850	6,443E-01	1150	6,444E-01	2450	5,969E-01	3950	2,780E-04
260	8,8E-01	560	2,200E-02	860	6,463E-01	1160	6,248E-01	2500	5,835E-01	4000	2,000E-04
270	9,1E-01	570	1,136E-02	870	6,476E-01	1170	6,122E-01	2550	5,246E-01	4050	1,271E-04
280	9,4E-01	580	7,810E-03	880	6,487E-01	1180	5,947E-01	2600	5,010E-01	4100	8,166E-05
290	9,5E-01	590	9,020E-03	890	6,518E-01	1190	5,762E-01	2650	4,806E-01	4150	5,902E-05
300	9,6E-01	600	1,203E-02	900	6,543E-01	1200	5,600E-01	2700	4,461E-01	4200	5,093E-05
310	9,7E-01	610	1,514E-02	910	6,606E-01	1250	4,893E-01	2750	3,534E-01	4250	5,433E-05
320	9,757E-01	620	1,703E-02	920	6,628E-01	1300	4,429E-01	2800	1,200E-01	4300	7,000E-05
330	9,802E-01	630	2,304E-02	930	6,694E-01	1350	4,351E-01	2850	3,622E-02	4350	1,009E-04
340	9,816E-01	640	4,400E-02	940	6,745E-01	1400	4,400E-01	2900	1,396E-02	4400	1,371E-04
350	9,809E-01	650	1,010E-01	950	6,826E-01	1450	4,374E-01	2950	7,228E-03	4450	1,726E-04
360	9,761E-01	660	2,270E-01	960	6,876E-01	1500	4,343E-01	3000	3,784E-03	4500	2,113E-04
370	9,600E-01	670	4,140E-01	970	6,962E-01	1550	4,374E-01	3050	2,037E-03	4550	2,570E-04
380	9,120E-01	680	5,950E-01	980	7,030E-01	1600	4,555E-01	3100	1,169E-03	4600	3,000E-04
390	7,870E-01	690	7,270E-01	990	7,112E-01	1650	4,767E-01	3150	7,430E-04	4650	3,516E-04
400	5,700E-01	700	7,990E-01	1000	7,164E-01	1700	4,900E-01	3200	4,775E-04	4700	4,000E-04
410	3,600E-01	710	8,290E-01	1010	7,232E-01	1750	4,979E-01	3250	3,236E-04	4750	4,315E-04
420	2,360E-01	720	8,320E-01	1020	7,278E-01	1800	5,000E-01	3300	2,296E-04	4800	4,688E-04
430	1,780E-01	730	8,180E-01	1030	7,317E-01	1850	5,128E-01	3350	1,910E-04	4850	4,909E-04
440	1,680E-01	740	7,950E-01	1040	7,338E-01	1900	5,293E-01	3400	1,758E-04	4900	5,000E-04
450	1,780E-01	750	7,690E-01	1050	7,344E-01	1950	5,529E-01	3450	1,758E-04	4950	5,000E-04
460	1,830E-01	760	7,430E-01	1060	7,347E-01	2000	5,700E-01	3500	1,910E-04	5000	4,955E-04
470	1,660E-01	770	7,190E-01	1070	7,305E-01	2050	5,874E-01	3550	2,133E-04	5050	4,645E-04
480	1,470E-01	780	6,980E-01	1080	7,267E-01	2100	6,000E-01	3600	2,547E-04	5100	4,000E-04
490	1,260E-01	790	6,789E-01	1090	7,194E-01	2150	6,094E-01	3650	3,000E-04	5150	2,742E-04