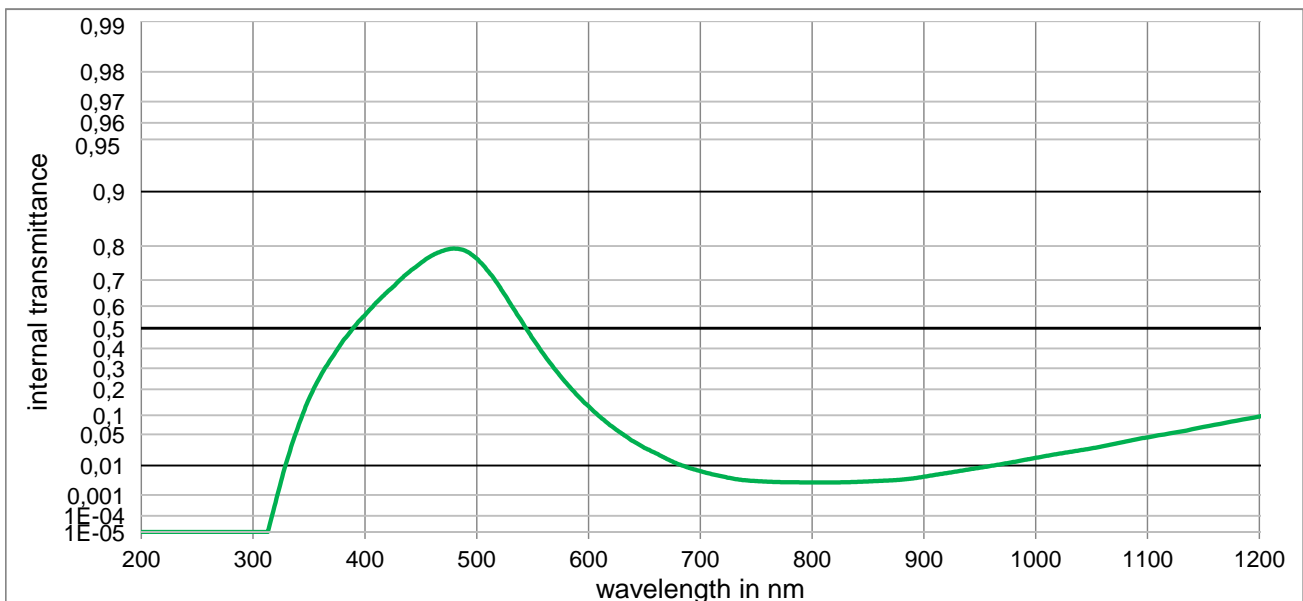
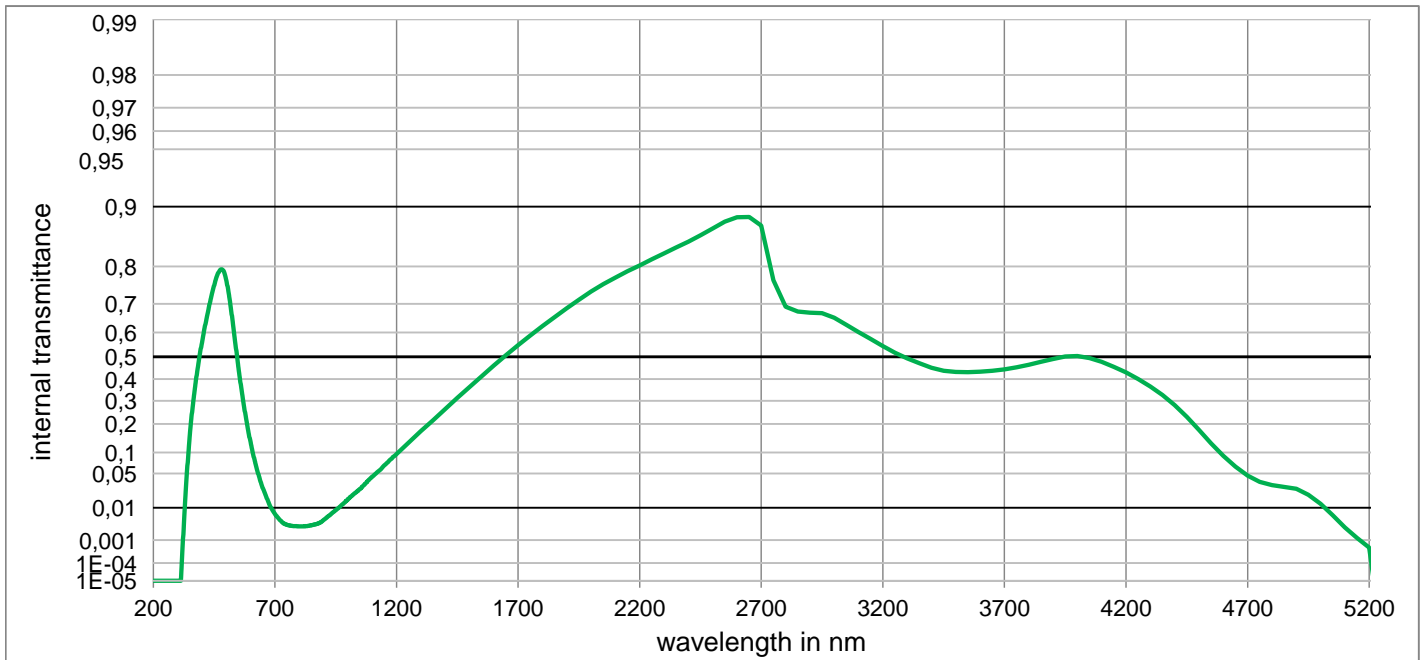


## BG7

Optical properties	Mechanical properties	Colormetric properties																														
<b>Reflection factor</b>	<b>Reference thickness</b>	1 mm      2 mm      3 mm																														
$P_d = 0,919$	$d = 1,00 \text{ mm}$	<table border="1"> <tr> <td rowspan="5">Illuminant D65</td> <td>x</td> <td>0,191</td> <td>0,152</td> <td>0,138</td> </tr> <tr> <td>y</td> <td>0,272</td> <td>0,229</td> <td>0,200</td> </tr> <tr> <td>Y</td> <td>37,9</td> <td>20,6</td> <td>12,7</td> </tr> <tr> <td><math>\lambda_d</math></td> <td>486 nm</td> <td>484 nm</td> <td>482 nm</td> </tr> <tr> <td><math>P_e</math></td> <td>0,493</td> <td>0,675</td> <td>0,758</td> </tr> </table>	Illuminant D65	x	0,191	0,152	0,138	y	0,272	0,229	0,200	Y	37,9	20,6	12,7	$\lambda_d$	486 nm	484 nm	482 nm	$P_e$	0,493	0,675	0,758									
Illuminant D65	x			0,191	0,152	0,138																										
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	$P_e$	0,493	0,675	0,758																												
<b>Spectral values guaranteed</b>	<b>Density</b>	<table border="1"> <tr> <td rowspan="5">Illuminant A</td> <td>x</td> <td>0,262</td> <td>0,179</td> <td>0,145</td> </tr> <tr> <td>y</td> <td>0,406</td> <td>0,360</td> <td>0,317</td> </tr> <tr> <td>Y</td> <td>30,1</td> <td>14,5</td> <td>8,2</td> </tr> <tr> <td><math>\lambda_d</math></td> <td>495 nm</td> <td>492 nm</td> <td>490 nm</td> </tr> <tr> <td><math>P_e</math></td> <td>0,438</td> <td>0,654</td> <td>0,755</td> </tr> </table>	Illuminant A	x	0,262	0,179	0,145	y	0,406	0,360	0,317	Y	30,1	14,5	8,2	$\lambda_d$	495 nm	492 nm	490 nm	$P_e$	0,438	0,654	0,755									
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$\tau_i$ (365 nm) $\geq 0,25$	<b>Knoop hardness</b>	<table border="1"> <tr> <td colspan="5"><b>Notes</b></td> </tr> <tr> <td colspan="5">Ionically colored glass</td> </tr> <tr> <td colspan="5">Bandpass filter / Shortpass filter</td> </tr> <tr> <td colspan="5">DIN 58131</td> </tr> <tr> <td colspan="5"><b>Disclaimer</b></td> </tr> <tr> <td colspan="5">All data without tolerances are to be understood to be reference values.</td> </tr> </table>	<b>Notes</b>					Ionically colored glass					Bandpass filter / Shortpass filter					DIN 58131					<b>Disclaimer</b>					All data without tolerances are to be understood to be reference values.				
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$\tau_i$ (488 nm) $\geq 0,78$	$\rho = 2,60 \text{ g/cm}^3$																															
$\tau_i$ (633 nm) $\leq 0,08$	<b>Thermal properties</b>																															
	<b>Transformation temperature</b>																															
	$T_g = 447 \text{ }^\circ\text{C}$																															
	<b>Thermal expansion in <math>10^{-6}/\text{K}</math></b>																															
	$\alpha_{(-30^\circ\text{C}/+70^\circ\text{C})} = 8,7$																															
	$\alpha_{(20^\circ\text{C}/300^\circ\text{C})} = 10,0$																															
<b>Refractive indices</b>	<b>Chemical properties</b>																															
$n_F$ (486 nm) = 1,53	<b>Chemical resistance</b>																															
$n_e$ (546 nm) = 1,52	FR class = 0																															
$n_d$ (587,6 nm) = 1,52	SR class = 1																															
	AR class = 1																															
	<b>Resistance against humidity</b>																															
<b>Sellmeier coefficients</b>	Robust glass																															
valid from 440 nm to 1550 nm	see pocket catalogue "Optical Filter Glass 2020", chapter 5.5																															
$B_1$ 0,5574																																
$B_2$ 0,7122																																
$B_3$ 37,3513																																
$C_2$ 1,8447E-02 $\mu\text{m}^2$																																
$C_3$ 5502,533 $\mu\text{m}^2$																																
<b>Internal quality</b>																																
Bubble class 1																																



BG7



**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	7,670E-01	800	2,994E-03	1100	4,400E-02	2200	8,025E-01	3700	4,437E-01
210	< 1,0E-05	510	7,300E-01	810	2,991E-03	1110	4,807E-02	2250	8,157E-01	3750	4,531E-01
220	< 1,0E-05	520	6,790E-01	820	3,000E-03	1120	5,220E-02	2300	8,274E-01	3800	4,648E-01
230	< 1,0E-05	530	6,110E-01	830	3,035E-03	1130	5,630E-02	2350	8,386E-01	3850	4,779E-01
240	< 1,0E-05	540	5,350E-01	840	3,117E-03	1140	6,164E-02	2400	8,493E-01	3900	4,903E-01
250	< 1,0E-05	550	4,500E-01	850	3,240E-03	1150	6,717E-02	2450	8,600E-01	3950	5,013E-01
260	< 1,0E-05	560	3,690E-01	860	3,370E-03	1160	7,262E-02	2500	8,704E-01	4000	5,034E-01
270	< 1,0E-05	570	2,950E-01	870	3,515E-03	1170	7,810E-02	2550	8,805E-01	4050	4,947E-01
280	< 1,0E-05	580	2,290E-01	880	3,723E-03	1180	8,353E-02	2600	8,866E-01	4100	4,778E-01
290	< 1,0E-05	590	1,740E-01	890	4,074E-03	1190	8,971E-02	2650	8,869E-01	4150	4,560E-01
300	< 1,0E-05	600	1,310E-01	900	4,627E-03	1200	9,577E-02	2700	8,749E-01	4200	4,300E-01
310	< 1,0E-05	610	9,600E-02	910	5,299E-03	1250	1,317E-01	2750	7,671E-01	4250	3,997E-01
320	4,675E-04	620	7,000E-02	920	5,997E-03	1300	1,713E-01	2800	6,908E-01	4300	3,656E-01
330	1,289E-02	630	5,100E-02	930	6,812E-03	1350	2,151E-01	2850	6,751E-01	4350	3,263E-01
340	6,592E-02	640	3,700E-02	940	7,737E-03	1400	2,635E-01	2900	6,716E-01	4400	2,809E-01
350	1,600E-01	650	2,700E-02	950	8,668E-03	1450	3,140E-01	2950	6,698E-01	4450	2,297E-01
360	2,600E-01	660	2,070E-02	960	9,771E-03	1500	3,629E-01	3000	6,536E-01	4500	1,774E-01
370	3,490E-01	670	1,500E-02	970	1,100E-02	1550	4,125E-01	3050	6,281E-01	4550	1,280E-01
380	4,350E-01	680	1,103E-02	980	1,244E-02	1600	4,621E-01	3100	6,016E-01	4600	9,050E-02
390	5,040E-01	690	8,610E-03	990	1,407E-02	1650	5,077E-01	3150	5,741E-01	4650	6,410E-02
400	5,610E-01	700	6,910E-03	1000	1,593E-02	1700	5,497E-01	3200	5,456E-01	4700	4,610E-02
410	6,140E-01	710	5,620E-03	1010	1,784E-02	1750	5,885E-01	3250	5,170E-01	4750	3,580E-02
420	6,570E-01	720	4,710E-03	1020	1,981E-02	1800	6,238E-01	3300	4,930E-01	4800	3,122E-02
430	6,950E-01	730	3,974E-03	1030	2,181E-02	1850	6,562E-01	3350	4,715E-01	4850	2,870E-02
440	7,280E-01	740	3,550E-03	1040	2,396E-02	1900	6,854E-01	3400	4,512E-01	4900	2,660E-02
450	7,540E-01	750	3,317E-03	1050	2,634E-02	1950	7,124E-01	3450	4,376E-01	4950	2,000E-02
460	7,755E-01	760	3,182E-03	1060	2,928E-02	2000	7,365E-01	3500	4,328E-01	5000	1,250E-02
470	7,881E-01	770	3,080E-03	1070	3,273E-02	2050	7,569E-01	3550	4,316E-01	5050	6,300E-03
480	7,936E-01	780	3,032E-03	1080	3,649E-02	2100	7,736E-01	3600	4,338E-01	5100	2,760E-03
490	7,880E-01	790	3,009E-03	1090	4,051E-02	2150	7,893E-01	3650	4,378E-01	5150	1,210E-03