

## S8612

Optical properties	
<b>Reflection factor</b>	
$P_d = 0,913$	
<b>Spectral values guaranteed</b>	
$\tau_i$ (500 nm)	$\geq 0,96$
$\tau_i$ (600 nm)	$\geq 0,48$
$\tau_i$ (700 nm)	$< 0,02$
$\lambda$ ( $\tau_{i,max}$ ) [nm]	$= 500 \pm 5$
<b>Refractive indices</b>	
$n_F$ (486 nm)	$= 1,55$
$n_e$ (546 nm)	$= 1,54$
$n_d$ (587,6 nm)	$= 1,54$
<b>Sellmeier coefficients</b>	
valid from 400 nm to 1550 nm	
$B_1$	0,9589
$B_2$	0,3811
$B_3$	1,1938
$C_1$	$8,342E-03 \mu m^2$
$C_2$	$1,0187E-02 \mu m^2$
$C_3$	$134,146 \mu m^2$
<b>Internal quality</b>	
Bubble class	1

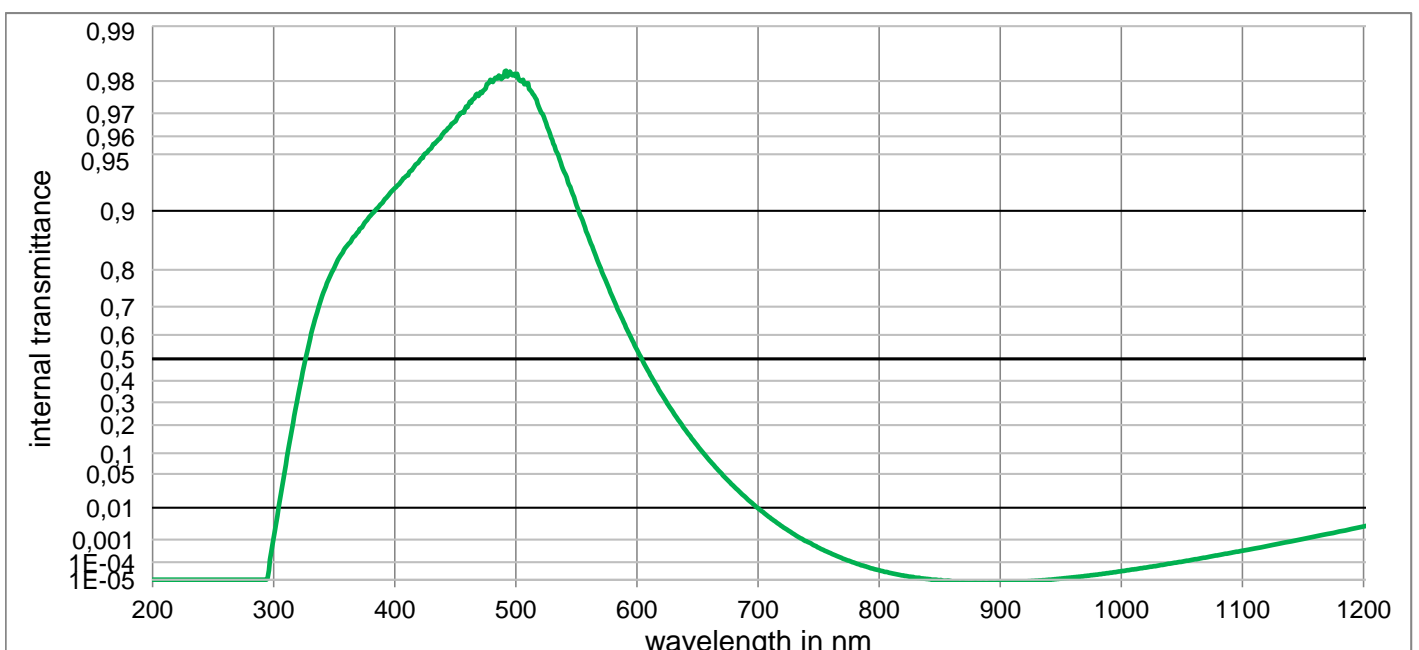
Mechanical properties	
<b>Reference thickness</b>	
$d = 1,00 \text{ mm}$	
<b>Density</b>	
$\rho = 2,66 \text{ g/cm}^3$	
<b>Knoop hardness</b>	
$HK[0.1/20] = 470$	

Thermal properties	
<b>Transformation temperature</b>	
$T_g = 391 \text{ }^\circ\text{C}$	
<b>Thermal expansion in</b> $10^{-6}/\text{K}$	
$\alpha_{(20^\circ\text{C}/300^\circ\text{C})} = 9,5$	

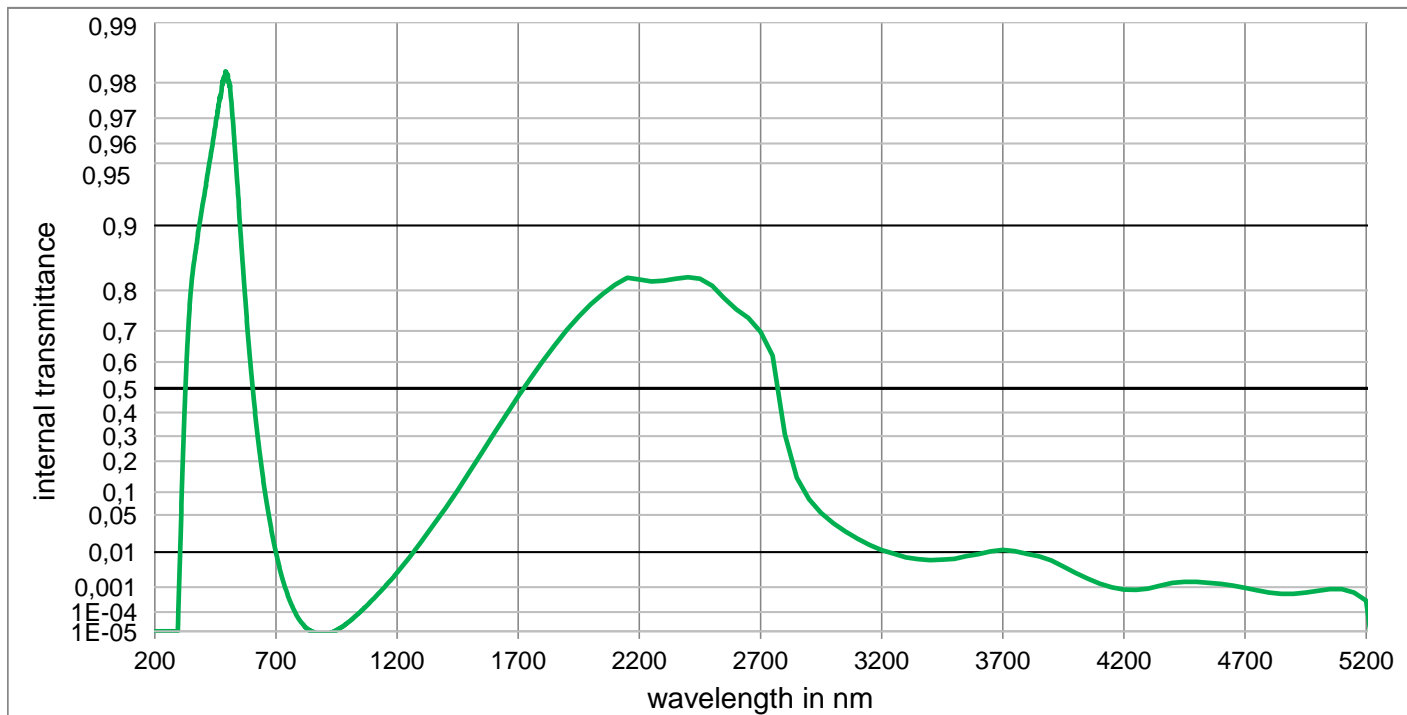
Chemical properties	
<b>Chemical resistance</b>	
FR class	$= 0$
SR class	$= 3$
AR class	$= 3$
<b>Resistance against humidity</b>	
Delicate glass	
see pocket catalogue "Optical Filter Glass 2020", chapter 5.5	

Colormetric properties				
		1 mm	2 mm	3 mm
Illuminant D65	x	0,251	0,218	0,198
	y	0,321	0,311	0,302
	Y	72,1	61,5	54,4
	$\lambda_d$	490 nm	489 nm	489 nm
	$P_e$	0,232	0,358	0,438
Illuminant A	x	0,356	0,301	0,265
	y	0,433	0,440	0,440
	Y	64,6	51,8	43,9
	$\lambda_d$	500 nm	499 nm	498 nm
	$P_e$	0,208	0,335	0,421

Notes	
Ionically colored glass	
Bandpass filter / Shortpass filter	
NIR cutoff filter	
DIN 58131	
Disclaimer	
All data without tolerances are to be understood to be reference values.	



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### 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	9,812E-01	800	3,721E-05	1100	3,490E-04	2200	8,214E-01	3700	1,127E-02
210	< 1,0E-05	510	9,794E-01	810	2,547E-05	1110	4,398E-04	2250	8,176E-01	3750	1,048E-02
220	< 1,0E-05	520	9,712E-01	820	1,846E-05	1120	5,462E-04	2300	8,190E-01	3800	9,124E-03
230	< 1,0E-05	530	9,581E-01	830	1,353E-05	1130	6,882E-04	2350	8,230E-01	3850	7,921E-03
240	< 1,0E-05	540	9,376E-01	840	1,144E-05	1140	8,525E-04	2400	8,257E-01	3900	6,253E-03
250	< 1,0E-05	550	9,064E-01	850	< 1,000E-05	1150	1,056E-03	2450	8,228E-01	3950	4,323E-03
260	< 1,0E-05	560	8,634E-01	860	< 1,000E-05	1160	1,303E-03	2500	8,093E-01	4000	2,878E-03
270	< 1,0E-05	570	8,031E-01	870	< 1,000E-05	1170	1,600E-03	2550	7,833E-01	4050	1,922E-03
280	< 1,0E-05	580	7,281E-01	880	< 1,000E-05	1180	1,949E-03	2600	7,570E-01	4100	1,324E-03
290	< 1,0E-05	590	6,380E-01	890	< 1,000E-05	1190	2,376E-03	2650	7,355E-01	4150	9,941E-04
300	1,2E-03	600	5,394E-01	900	< 1,000E-05	1200	2,905E-03	2700	6,974E-01	4200	8,230E-04
310	7,0E-02	610	4,375E-01	910	< 1,000E-05	1250	7,369E-03	2750	6,221E-01	4250	8,062E-04
320	3,262E-01	620	3,402E-01	920	< 1,000E-05	1300	1,688E-02	2800	3,075E-01	4300	8,948E-04
330	5,836E-01	630	2,532E-01	930	< 1,000E-05	1350	3,500E-02	2850	1,427E-01	4350	1,139E-03
340	7,324E-01	640	1,806E-01	940	< 1,000E-05	1400	6,250E-02	2900	8,200E-02	4400	1,405E-03
350	8,052E-01	650	1,227E-01	950	1,169E-05	1450	1,056E-01	2950	5,346E-02	4450	1,517E-03
360	8,471E-01	660	8,015E-02	960	1,407E-05	1500	1,633E-01	3000	3,712E-02	4500	1,498E-03
370	8,719E-01	670	5,011E-02	970	1,696E-05	1550	2,331E-01	3050	2,668E-02	4550	1,412E-03
380	8,942E-01	680	3,002E-02	980	2,080E-05	1600	3,106E-01	3100	1,947E-02	4600	1,288E-03
390	9,098E-01	690	1,724E-02	990	2,577E-05	1650	3,906E-01	3150	1,445E-02	4650	1,134E-03
400	9,241E-01	700	9,713E-03	1000	3,264E-05	1700	4,675E-01	3200	1,116E-02	4700	9,531E-04
410	9,351E-01	710	5,318E-03	1010	4,113E-05	1750	5,384E-01	3250	9,156E-03	4750	7,737E-04
420	9,452E-01	720	2,878E-03	1020	5,209E-05	1800	6,014E-01	3300	7,488E-03	4800	6,368E-04
430	9,536E-01	730	1,550E-03	1030	6,608E-05	1850	6,560E-01	3350	6,807E-03	4850	5,693E-04
440	9,614E-01	740	8,691E-04	1040	8,476E-05	1900	7,019E-01	3400	6,426E-03	4900	5,713E-04
450	9,668E-01	750	4,709E-04	1050	1,072E-04	1950	7,397E-01	3450	6,601E-03	4950	6,405E-04
460	9,722E-01	760	2,680E-04	1060	1,355E-04	2000	7,696E-01	3500	6,905E-03	5000	7,477E-04
470	9,764E-01	770	1,513E-04	1070	1,735E-04	2050	7,930E-01	3550	7,981E-03	5050	8,493E-04
480	9,801E-01	780	9,133E-05	1080	2,205E-04	2100	8,115E-01	3600	8,930E-03	5100	8,478E-04
490	9,810E-01	790	5,627E-05	1090	2,782E-04	2150	8,248E-01	3650	1,037E-02	5150	6,335E-04