

## KG5

Optical properties	
<b>Reflection factor</b>	
$P_d = 0,920$	
<b>Spectral values guaranteed</b>	
$\tau_i$ (365 nm)	$\geq 0,8$
$\tau_i$ (500 nm)	$\geq 0,86$
$\tau_i$ (600 nm)	$\geq 0,8$
$\tau_i$ (700 nm)	$\leq 0,43$
$\tau_i$ (800 nm)	$\leq 0,09$
$\tau_i$ (900 nm)	$\leq 0,008$
$\tau_i$ (1060 nm)	$\leq 0,0001$
$\tau_i$ (2200 nm)	$\leq 0,001$
<b>Refractive indices</b>	
$n_F$ (486 nm)	$= 1,518$
$n_e$ (546 nm)	$= 1,515$
$n_d$ (587,6 nm)	$= 1,513$
<b>Sellmeier coefficients</b>	
valid from 400 nm to 1550 nm	
$B_1$	1,0371
$B_2$	0,2237
$B_3$	33,7882
$C_1$	9,265E-03 $\mu\text{m}^2$
$C_2$	5,0235E-03 $\mu\text{m}^2$
$C_3$	3577,611 $\mu\text{m}^2$
<b>Internal quality</b>	
Bubble class	3

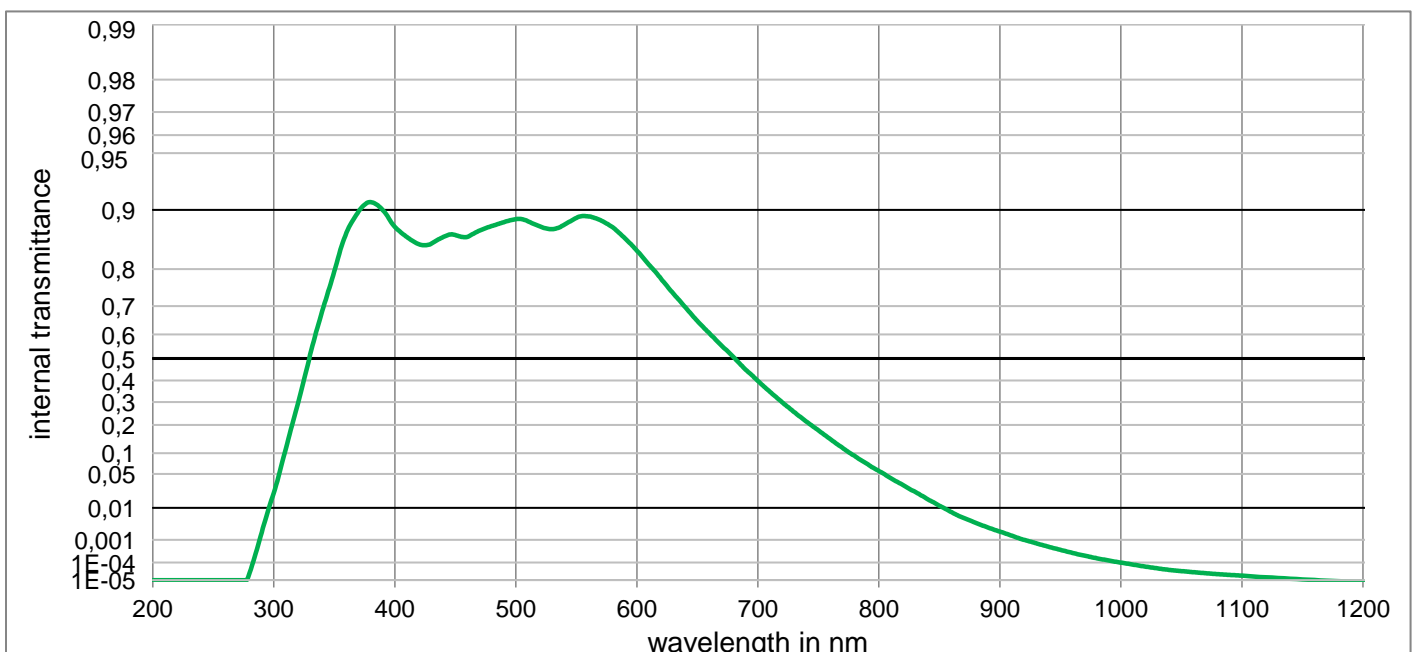
Mechanical properties	
<b>Reference thickness</b>	
$d = 2,00 \text{ mm}$	
<b>Density</b>	
$\rho = 2,53 \text{ g/cm}^3$	
<b>Knoop hardness</b>	
HK[0.1/20] = 435	

Thermal properties	
<b>Transformation temperature</b>	
$T_g = 565 \text{ }^\circ\text{C}$	
<b>Thermal expansion in</b> $10^{-6}/\text{K}$	
$\alpha$ (-30 $^\circ\text{C}/+70^\circ\text{C}$ )	$= 5,4$
$\alpha$ (20 $^\circ\text{C}/300^\circ\text{C}$ )	$= 6,2$

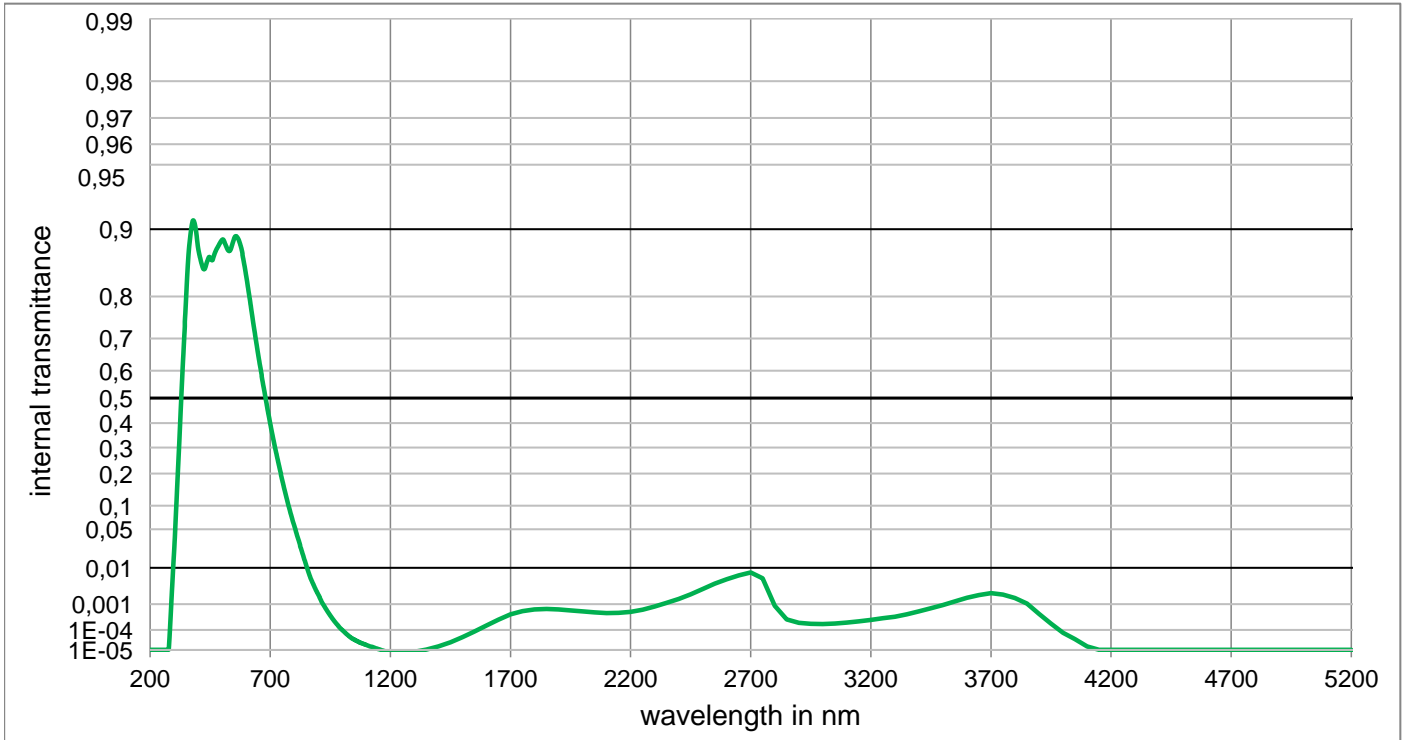
Chemical properties	
<b>Chemical resistance</b>	
FR class	$= 0$
SR class	$= 3$
AR class	$= 4$
<b>Resistance against humidity</b>	
Delicate glass	
see pocket catalogue "Optical Filter Glass 2024", chapter 5.5	

Colorimetric properties				
	1 mm	2 mm	3 mm	
Illuminant D65	x	0,308	0,304	0,300
	y	0,331	0,332	0,334
	Y	85,4	79,3	73,7
	$\lambda_d$	496 nm	496 nm	496 nm
	$P_e$	0,015	0,029	0,042
Illuminant A	x	0,440	0,434	0,427
	y	0,411	0,415	0,418
	Y	84,6	77,9	71,9
	$\lambda_d$	504 nm	505 nm	505 nm
$P_e$	0,016	0,031	0,045	

Notes	
<b>UV</b>	Transmission changes are possible under the action of intense ultraviolet radiation.
Ionically colored glass	
Shortpass filter	
Heat protection filter	
ISO 23364:2021	
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	< 1,000E-05	500	8,883E-01	800	5,600E-02	1100	1,875E-05	2200	5,413E-04	3700	2,208E-03
210	< 1,000E-05	510	8,854E-01	810	4,211E-02	1110	1,667E-05	2250	6,482E-04	3750	2,015E-03
220	< 1,000E-05	520	8,781E-01	820	3,171E-02	1120	1,500E-05	2300	8,290E-04	3800	1,577E-03
230	< 1,000E-05	530	8,743E-01	830	2,311E-02	1130	1,370E-05	2350	1,095E-03	3850	1,039E-03
240	< 1,000E-05	540	8,806E-01	840	1,632E-02	1140	1,239E-05	2400	1,479E-03	3900	4,560E-04
250	< 1,000E-05	550	8,900E-01	850	1,135E-02	1150	1,109E-05	2450	2,058E-03	3950	1,861E-04
260	< 1,000E-05	560	8,919E-01	860	7,720E-03	1160	1,007E-05	2500	2,914E-03	4000	7,390E-05
270	< 1,000E-05	570	8,870E-01	870	5,300E-03	1170	< 1,000E-05	2550	4,090E-03	4050	3,650E-05
280	2,793E-05	580	8,770E-01	880	3,839E-03	1180	< 1,000E-05	2600	5,337E-03	4100	1,570E-05
290	1,880E-03	590	8,600E-01	890	2,716E-03	1190	< 1,000E-05	2650	6,620E-03	4150	< 1,000E-05
300	2,200E-02	600	8,380E-01	900	1,990E-03	1200	< 1,000E-05	2700	7,858E-03	4200	< 1,000E-05
310	1,138E-01	610	8,100E-01	910	1,410E-03	1250	< 1,000E-05	2750	5,622E-03	4250	< 1,000E-05
320	2,950E-01	620	7,770E-01	920	1,000E-03	1300	< 1,000E-05	2800	8,872E-04	4300	< 1,000E-05
330	5,160E-01	630	7,380E-01	930	7,311E-04	1350	1,050E-05	2850	2,754E-04	4350	< 1,000E-05
340	6,840E-01	640	6,960E-01	940	5,320E-04	1400	1,549E-05	2900	2,037E-04	4400	< 1,000E-05
350	7,950E-01	650	6,500E-01	950	3,917E-04	1450	2,588E-05	2950	1,856E-04	4450	< 1,000E-05
360	8,690E-01	660	6,040E-01	960	2,877E-04	1500	4,550E-05	3000	1,817E-04	4500	< 1,000E-05
370	8,980E-01	670	5,550E-01	970	2,153E-04	1550	8,507E-05	3050	1,894E-04	4550	< 1,000E-05
380	9,090E-01	680	5,050E-01	980	1,633E-04	1600	1,545E-04	3100	2,083E-04	4600	< 1,000E-05
390	8,998E-01	690	4,500E-01	990	1,256E-04	1650	2,683E-04	3150	2,330E-04	4650	< 1,000E-05
400	8,774E-01	700	3,980E-01	1000	9,931E-05	1700	4,375E-04	3200	2,670E-04	4700	< 1,000E-05
410	8,619E-01	710	3,470E-01	1010	7,816E-05	1750	5,757E-04	3250	3,098E-04	4750	< 1,000E-05
420	8,497E-01	720	2,990E-01	1020	6,166E-05	1800	6,608E-04	3300	3,557E-04	4800	< 1,000E-05
430	8,505E-01	730	2,550E-01	1030	4,932E-05	1850	6,868E-04	3350	4,320E-04	4850	< 1,000E-05
440	8,619E-01	740	2,140E-01	1040	4,055E-05	1900	6,537E-04	3400	5,640E-04	4900	< 1,000E-05
450	8,651E-01	750	1,780E-01	1050	3,467E-05	1950	6,034E-04	3450	7,280E-04	4950	< 1,000E-05
460	8,620E-01	760	1,450E-01	1060	3,006E-05	2000	5,593E-04	3500	9,320E-04	5000	< 1,000E-05
470	8,720E-01	770	1,160E-01	1070	2,630E-05	2050	5,136E-04	3550	1,222E-03	5050	< 1,000E-05
480	8,787E-01	780	9,200E-02	1080	2,323E-05	2100	4,851E-04	3600	1,604E-03	5100	< 1,000E-05
490	8,841E-01	790	7,200E-02	1090	2,075E-05	2150	4,927E-04	3650	1,950E-03	5150	< 1,000E-05