

RG610

Optical properties	
Reflection factor	
P_d	0,920
Spectral values guaranteed (d = 3 mm)	
λ_c ($\tau_i = 0,5$)	= 610 nm \pm 6 nm
λ_s ($\tau_{i,U} = 1E-05$)	= 530 nm
λ_p ($\tau_{i,L} = 0,94$)	= 690 nm
Refractive indices	
n_d (587,6 nm)	= 1,51
n_s (852 nm)	= 1,51
n_t (1014 nm)	= 1,50
Sellmeier coefficients	
valid from 580 nm to 2330 nm	
B_1	= 1,2549
B_2	= 0,0002
B_3	= 0,7981
C_1	= 9,761E-03 μm^2
C_2	= 2,8886E-01 μm^2
C_3	= 98,991 μm^2
Internal quality	
Bubble class	3

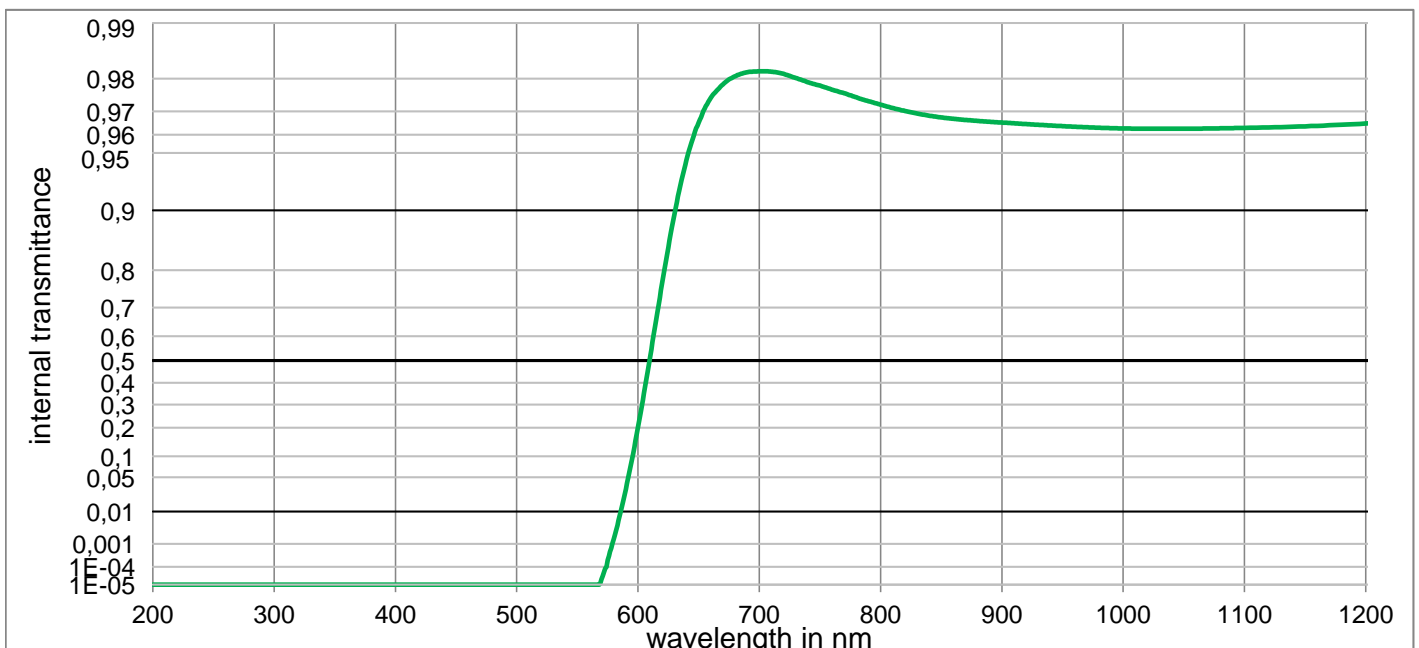
Mechanical properties	
Reference thickness	
d	= 3,00 mm
Density	
ρ	= 2,65 g/cm ³
Knoop hardness	
$HK_{[0.1/20]}$	= 448

Thermal properties	
Transformation temperature	
T_g	= 520 °C
Thermal expansion in 10⁻⁶/K	
α (-30°C/+70°C)	= 8,0
α (20°C/300°C)	= 9,2
Temperature coefficient	
Tk	= 0,14 nm/K

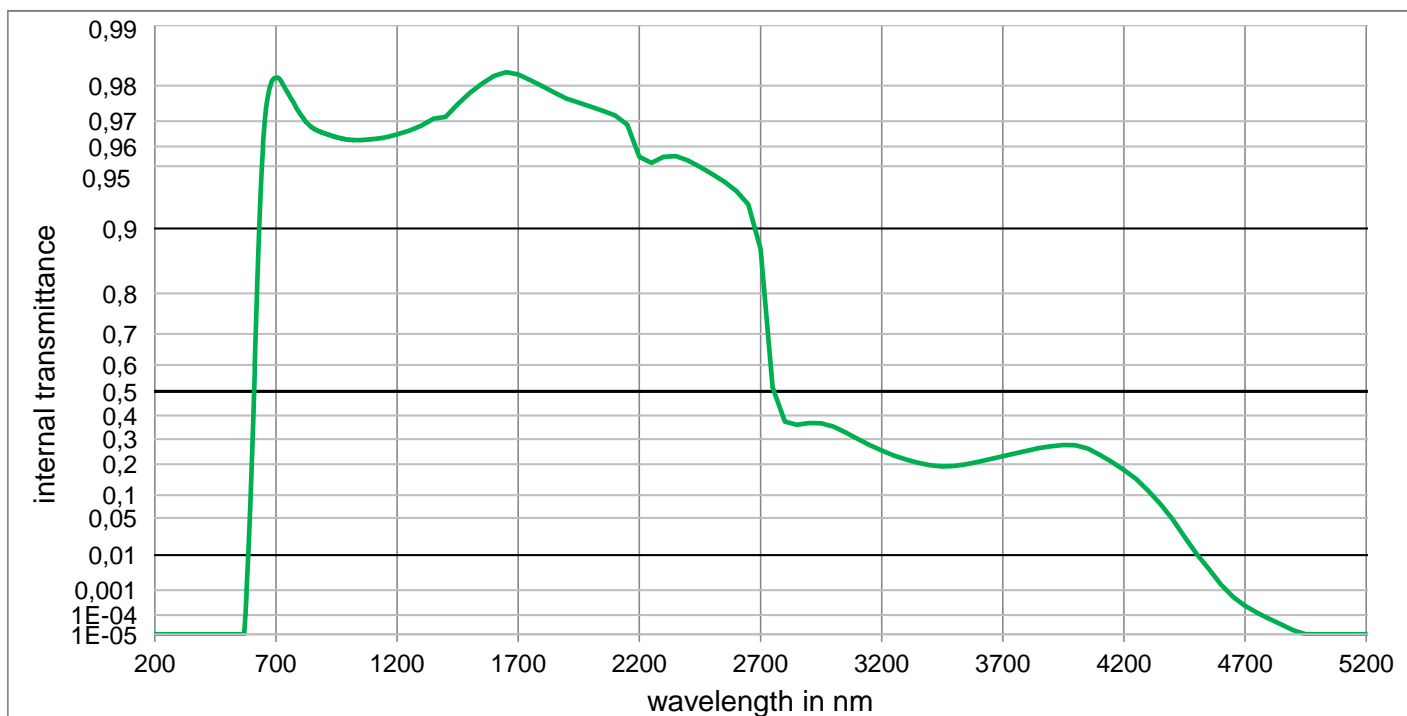
Chemical properties	
Chemical resistance	
FR class	
SR class	= 1
AR class	= 1
Resistance against humidity	
Resistant glass	
see pocket catalogue "Optical Filter Glass 2020", chapter 5.5	

Colormetric properties				
		1 mm	2 mm	3 mm
Illuminant D65	x	0,629	0,684	0,693
	y	0,330	0,315	0,307
	Y	17,4	11,9	9,9
	λ_d	611 nm	617 nm	621 nm
	P_e	0,886	0,996	1,000
Illuminant A	x	0,663	0,690	0,697
	y	0,328	0,310	0,303
	Y	26,5	19,7	16,8
	λ_d	614 nm	619 nm	623 nm
	P_e	0,939	0,998	0,999

Notes	
Stricking glass	
Longpass filter	
DIN 58131	
Disclaimer	
All data without tolerances are to be understood to be reference values.	



RG610



Internal transmittance τ_i at reference thickness

The internal transmittance values, tabulated and graphically represented, are reference values only

λ /nm	τ_i	λ /nm	τ_i	λ /nm	τ_i	λ /nm	τ_i	λ /nm	τ_i	λ /nm	τ_i
200	< 1,0E-05	500	< 1,000E-05	800	9,724E-01	1100	9,632E-01	2200	9,550E-01	3700	2,302E-01
210	< 1,0E-05	510	< 1,000E-05	810	9,713E-01	1110	9,633E-01	2250	9,519E-01	3750	2,411E-01
220	< 1,0E-05	520	< 1,000E-05	820	9,702E-01	1120	9,635E-01	2300	9,550E-01	3800	2,527E-01
230	< 1,0E-05	530	< 1,000E-05	830	9,692E-01	1130	9,636E-01	2350	9,554E-01	3850	2,631E-01
240	< 1,0E-05	540	< 1,000E-05	840	9,684E-01	1140	9,637E-01	2400	9,532E-01	3900	2,708E-01
250	< 1,0E-05	550	< 1,000E-05	850	9,677E-01	1150	9,639E-01	2450	9,496E-01	3950	2,756E-01
260	< 1,0E-05	560	< 1,000E-05	860	9,671E-01	1160	9,641E-01	2500	9,454E-01	4000	2,742E-01
270	< 1,0E-05	570	2,118E-05	870	9,667E-01	1170	9,644E-01	2550	9,405E-01	4050	2,614E-01
280	< 1,0E-05	580	1,470E-03	880	9,663E-01	1180	9,646E-01	2600	9,339E-01	4100	2,362E-01
290	< 1,0E-05	590	3,112E-02	890	9,659E-01	1190	9,649E-01	2650	9,232E-01	4150	2,080E-01
300	< 1,0E-05	600	2,019E-01	900	9,656E-01	1200	9,652E-01	2700	8,746E-01	4200	1,793E-01
310	< 1,0E-05	610	5,164E-01	910	9,653E-01	1250	9,666E-01	2750	5,165E-01	4250	1,482E-01
320	< 1,000E-05	620	7,703E-01	920	9,649E-01	1300	9,685E-01	2800	3,748E-01	4300	1,123E-01
330	< 1,000E-05	630	8,948E-01	930	9,646E-01	1350	9,708E-01	2850	3,606E-01	4350	7,840E-02
340	< 1,000E-05	640	9,454E-01	940	9,643E-01	1400	9,715E-01	2900	3,684E-01	4400	4,815E-02
350	< 1,000E-05	650	9,655E-01	950	9,640E-01	1450	9,753E-01	2950	3,671E-01	4450	2,387E-02
360	< 1,000E-05	660	9,746E-01	960	9,638E-01	1500	9,783E-01	3000	3,529E-01	4500	1,073E-02
370	< 1,000E-05	670	9,785E-01	970	9,635E-01	1550	9,804E-01	3050	3,291E-01	4550	4,530E-03
380	< 1,000E-05	680	9,806E-01	980	9,633E-01	1600	9,821E-01	3100	3,018E-01	4600	1,580E-03
390	< 1,000E-05	690	9,815E-01	990	9,631E-01	1650	9,829E-01	3150	2,753E-01	4650	5,741E-04
400	< 1,000E-05	700	9,817E-01	1000	9,630E-01	1700	9,824E-01	3200	2,529E-01	4700	2,512E-04
410	< 1,000E-05	710	9,817E-01	1010	9,629E-01	1750	9,812E-01	3250	2,334E-01	4750	1,279E-04
420	< 1,000E-05	720	9,812E-01	1020	9,628E-01	1800	9,799E-01	3300	2,183E-01	4800	6,668E-05
430	< 1,000E-05	730	9,802E-01	1030	9,628E-01	1850	9,783E-01	3350	2,060E-01	4850	3,420E-05
440	< 1,000E-05	740	9,791E-01	1040	9,628E-01	1900	9,768E-01	3400	1,965E-01	4900	1,687E-05
450	< 1,000E-05	750	9,782E-01	1050	9,628E-01	1950	9,757E-01	3450	1,917E-01	4950	< 1,000E-05
460	< 1,000E-05	760	9,771E-01	1060	9,629E-01	2000	9,746E-01	3500	1,933E-01	5000	< 1,000E-05
470	< 1,000E-05	770	9,761E-01	1070	9,630E-01	2050	9,733E-01	3550	1,999E-01	5050	< 1,000E-05
480	< 1,000E-05	780	9,748E-01	1080	9,630E-01	2100	9,719E-01	3600	2,098E-01	5100	< 1,000E-05
490	< 1,000E-05	790	9,736E-01	1090	9,631E-01	2150	9,688E-01	3650	2,201E-01	5150	< 1,000E-05