

## OG550

Optical properties	
<b>Reflection factor</b>	
$P_d$	= 0,920
<b>Spectral values guaranteed (d = 3 mm)</b>	
$\lambda_c$ ( $\tau_i = 0,5$ )	= 550 nm $\pm$ 6 nm
$\lambda_s$ ( $\tau_{i,U} = 1E-05$ )	= 480 nm
$\lambda_p$ ( $\tau_{i,L} = 0,93$ )	= 620 nm
<b>Refractive indices</b>	
$n_d$ (587,6 nm)	= 1,51
$n_s$ (852 nm)	= 1,5
$n_t$ (1014 nm)	= 1,50
<b>Sellmeier coefficients</b>	
valid from 580 nm to 2330 nm	
$B_1$	= 1,2525
$B_2$	= 0,0009
$B_3$	= 0,8269
$C_1$	= 9,542E-03 $\mu\text{m}^2$
$C_2$	= 1,8891E-01 $\mu\text{m}^2$
$C_3$	= 101,937 $\mu\text{m}^2$
<b>Internal quality</b>	
Bubble class	3

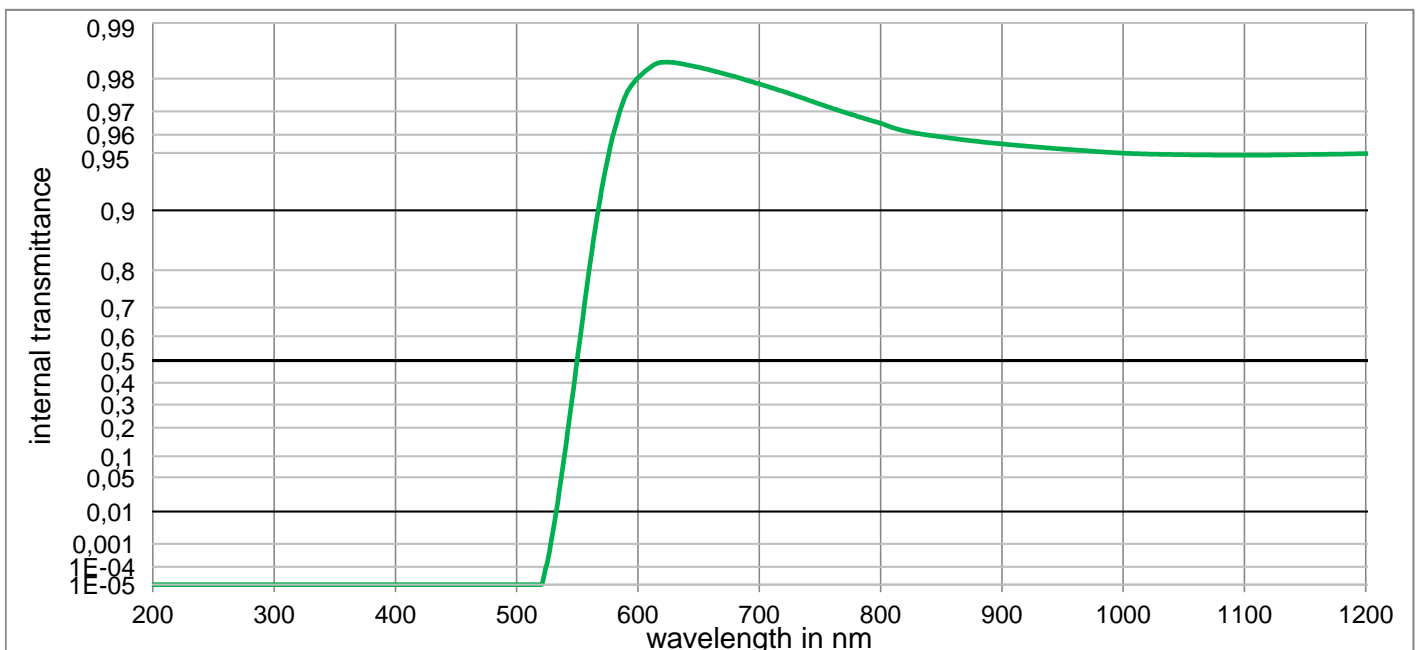
Mechanical properties	
<b>Reference thickness</b>	
d	= 3,00 mm
<b>Density</b>	
$\rho$	= 2,56 g/cm <sup>3</sup>
<b>Knoop hardness</b>	
$HK_{[0.1/20]}$	= 462

Thermal properties	
<b>Transformation temperature</b>	
$T_g$	= 507 °C
<b>Thermal expansion in <math>10^{-6}/K</math></b>	
$\alpha$ (-30°C/+70°C)	= 7,9
$\alpha$ (20°C/300°C)	= 9,0
<b>Temperature coefficient</b>	
$Tk$	= 0,12 nm/K

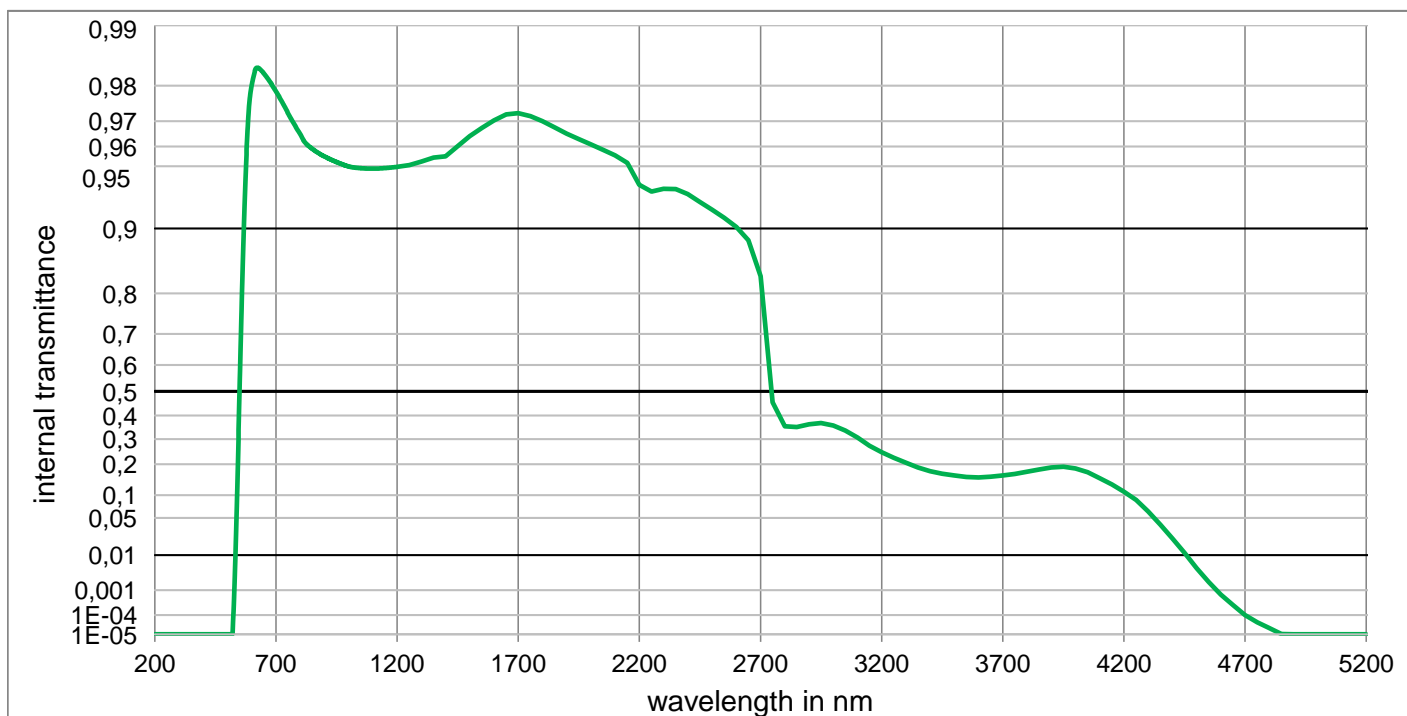
Chemical properties	
<b>Chemical resistance</b>	
FR class	= 0
SR class	= 1
AR class	= 1
<b>Resistance against humidity</b>	
Resistant glass	
see pocket catalogue "Optical Filter Glass 2020", chapter 5.5	

Colormetric properties				
		1 mm	2 mm	3 mm
Illuminant D65	x	0,521	0,547	0,557
	y	0,459	0,451	0,441
	Y	58,3	52,3	48,9
	$\lambda_d$	583 nm	586 nm	587 nm
	$P_e$	0,948	0,996	0,998
Illuminant A	x	0,565	0,580	0,587
	y	0,429	0,419	0,412
	Y	69,8	64,8	61,7
	$\lambda_d$	589 nm	591 nm	592 nm
	$P_e$	0,963	0,995	0,997

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



## OG550



**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	< 1,000E-05	800	9,652E-01	1100	9,486E-01	2200	9,385E-01	3700	1,601E-01
210	< 1,0E-05	510	< 1,000E-05	810	9,633E-01	1110	9,486E-01	2250	9,335E-01	3750	1,653E-01
220	< 1,0E-05	520	< 1,000E-05	820	9,618E-01	1120	9,487E-01	2300	9,356E-01	3800	1,725E-01
230	< 1,0E-05	530	2,837E-03	830	9,607E-01	1130	9,488E-01	2350	9,353E-01	3850	1,806E-01
240	< 1,0E-05	540	1,194E-01	840	9,597E-01	1140	9,489E-01	2400	9,316E-01	3900	1,878E-01
250	< 1,0E-05	550	5,076E-01	850	9,589E-01	1150	9,490E-01	2450	9,254E-01	3950	1,905E-01
260	< 1,0E-05	560	8,065E-01	860	9,581E-01	1160	9,491E-01	2500	9,186E-01	4000	1,842E-01
270	< 1,0E-05	570	9,217E-01	870	9,573E-01	1170	9,492E-01	2550	9,112E-01	4050	1,706E-01
280	< 1,0E-05	580	9,608E-01	880	9,566E-01	1180	9,493E-01	2600	9,015E-01	4100	1,507E-01
290	< 1,0E-05	590	9,755E-01	890	9,559E-01	1190	9,495E-01	2650	8,864E-01	4150	1,305E-01
300	< 1,0E-05	600	9,802E-01	900	9,552E-01	1200	9,496E-01	2700	8,330E-01	4200	1,098E-01
310	< 1,0E-05	610	9,826E-01	910	9,546E-01	1250	9,507E-01	2750	4,559E-01	4250	8,790E-02
320	< 1,000E-05	620	9,837E-01	920	9,540E-01	1300	9,525E-01	2800	3,545E-01	4300	6,225E-02
330	< 1,000E-05	630	9,836E-01	930	9,534E-01	1350	9,547E-01	2850	3,508E-01	4350	3,942E-02
340	< 1,000E-05	640	9,832E-01	940	9,529E-01	1400	9,553E-01	2900	3,630E-01	4400	2,259E-02
350	< 1,000E-05	650	9,826E-01	950	9,523E-01	1450	9,602E-01	2950	3,684E-01	4450	1,125E-02
360	< 1,000E-05	660	9,820E-01	960	9,518E-01	1500	9,644E-01	3000	3,570E-01	4500	4,721E-03
370	< 1,000E-05	670	9,813E-01	970	9,513E-01	1550	9,676E-01	3050	3,358E-01	4550	1,845E-03
380	< 1,000E-05	680	9,805E-01	980	9,508E-01	1600	9,703E-01	3100	3,065E-01	4600	7,031E-04
390	< 1,000E-05	690	9,796E-01	990	9,503E-01	1650	9,722E-01	3150	2,725E-01	4650	2,704E-04
400	< 1,000E-05	700	9,786E-01	1000	9,499E-01	1700	9,727E-01	3200	2,459E-01	4700	9,979E-05
410	< 1,000E-05	710	9,776E-01	1010	9,496E-01	1750	9,717E-01	3250	2,244E-01	4750	4,519E-05
420	< 1,000E-05	720	9,765E-01	1020	9,493E-01	1800	9,700E-01	3300	2,055E-01	4800	2,259E-05
430	< 1,000E-05	730	9,753E-01	1030	9,492E-01	1850	9,678E-01	3350	1,881E-01	4850	1,052E-05
440	< 1,000E-05	740	9,740E-01	1040	9,490E-01	1900	9,655E-01	3400	1,749E-01	4900	< 1,000E-05
450	< 1,000E-05	750	9,726E-01	1050	9,489E-01	1950	9,632E-01	3450	1,660E-01	4950	< 1,000E-05
460	< 1,000E-05	760	9,711E-01	1060	9,488E-01	2000	9,609E-01	3500	1,599E-01	5000	< 1,000E-05
470	< 1,000E-05	770	9,697E-01	1070	9,487E-01	2050	9,585E-01	3550	1,546E-01	5050	< 1,000E-05
480	< 1,000E-05	780	9,682E-01	1080	9,487E-01	2100	9,558E-01	3600	1,533E-01	5100	< 1,000E-05
490	< 1,000E-05	790	9,668E-01	1090	9,486E-01	2150	9,519E-01	3650	1,558E-01	5150	< 1,000E-05