

## RG665

Optical properties	
<b>Reflection factor</b>	
$P_d$	= 0,918
<b>Spectral values guaranteed (d = 3 mm)</b>	
$\lambda_c$ ( $\tau_i = 0,5$ )	= 665 nm $\pm$ 6 nm
$\lambda_s$ ( $\tau_{i,U} = 1E-05$ )	= 580 nm
$\lambda_p$ ( $\tau_{i,L} = 0,96$ )	= 750 nm
<b>Refractive indices</b>	
$n_d$ (587,6 nm)	= 1,52
$n_s$ (852 nm)	= 1,51
$n_t$ (1014 nm)	= 1,51
<b>Sellmeier coefficients</b>	
valid from 350 nm to 2400 nm	
$B_1$	= 0,7958
$B_2$	= 0,4847
$B_3$	= 0,8880
$C_1$	= 5,130E-03 $\mu\text{m}^2$
$C_2$	= 1,8116E-02 $\mu\text{m}^2$
$C_3$	= 117,823 $\mu\text{m}^2$
<b>Internal quality</b>	
Bubble class	3

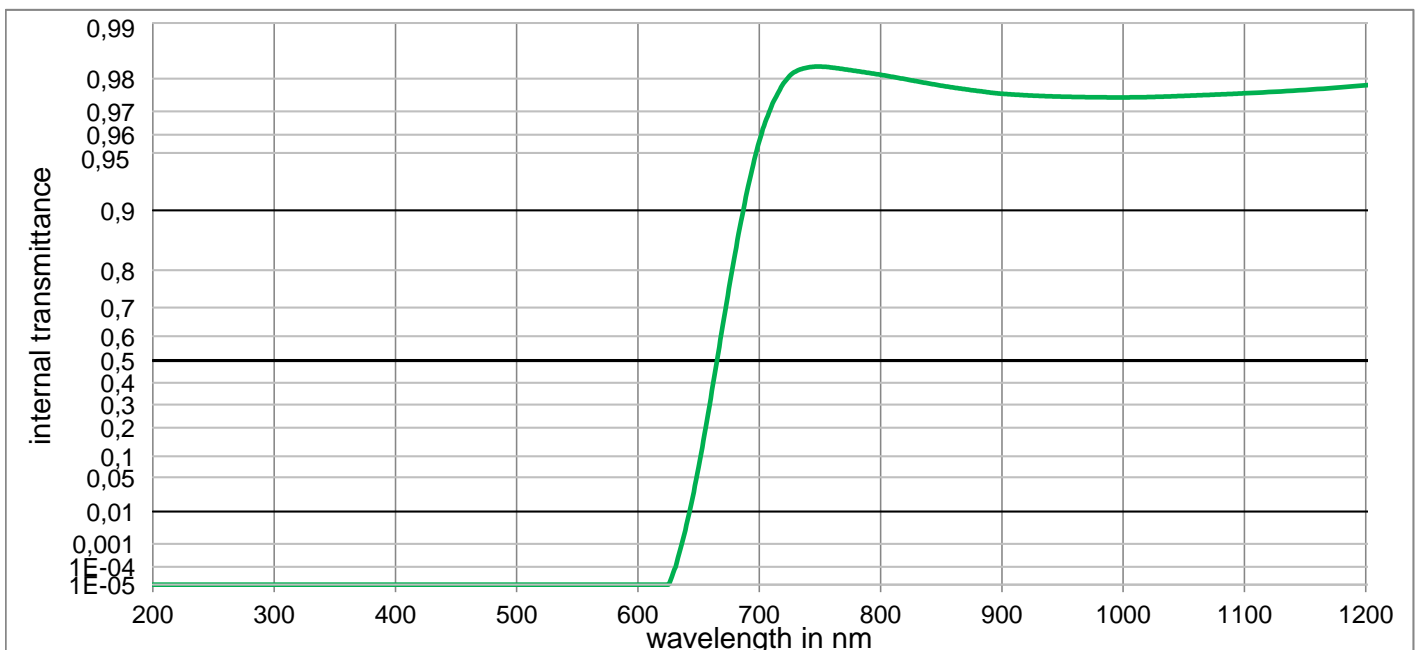
Mechanical properties	
<b>Reference thickness</b>	
d	= 3,00 mm
<b>Density</b>	
$\rho$	= 2,77 g/cm <sup>3</sup>
<b>Knoop hardness</b>	
$HK_{[0.1/20]}$	= 453

Thermal properties	
<b>Transformation temperature</b>	
$T_g$	= 527 °C
<b>Thermal expansion in 10<sup>-6</sup>/K</b>	
$\alpha$ (-30°C/+70°C)	= 8,1
$\alpha$ (20°C/300°C)	= 9,4
<b>Temperature coefficient</b>	
$Tk$	= 0,17 nm/K

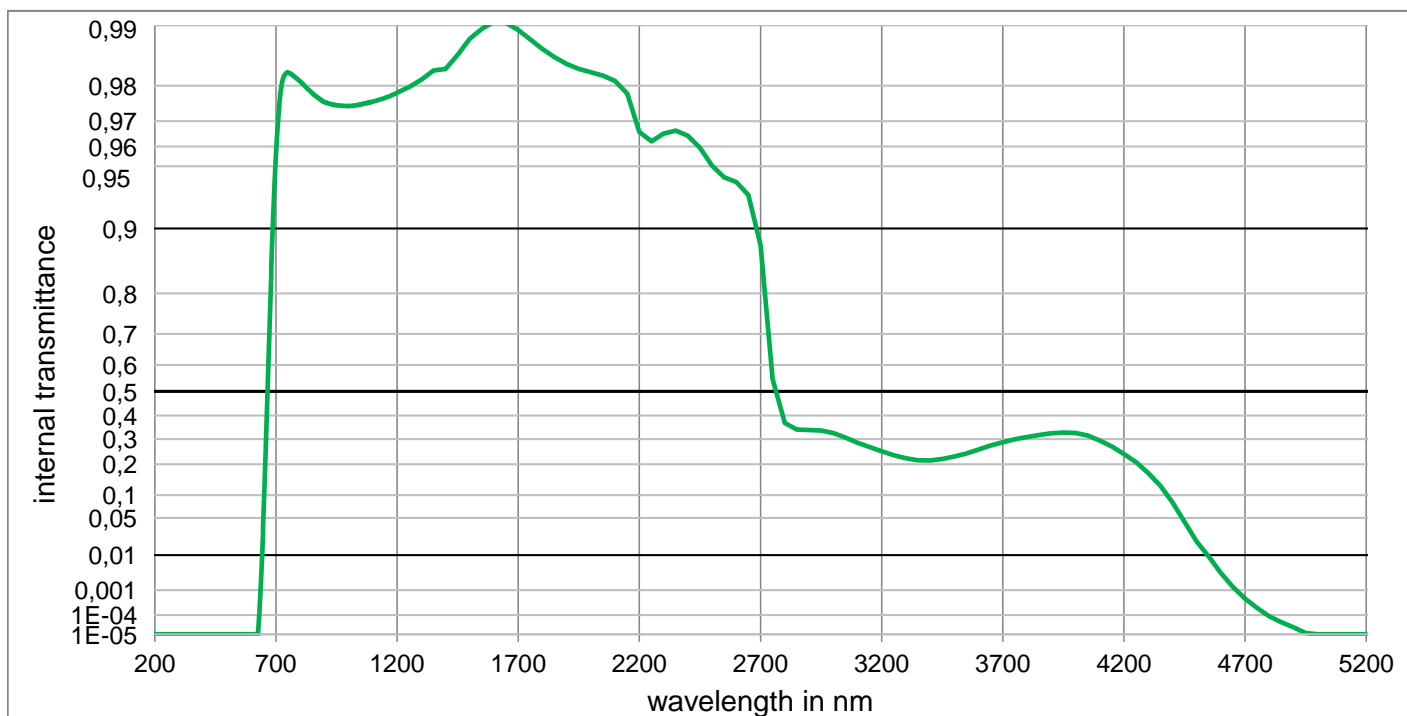
Chemical properties	
<b>Chemical resistance</b>	
FR class	= 0
SR class	= 1
AR class	= 1
<b>Resistance against humidity</b>	
Robust glass	
see pocket catalogue "Optical Filter Glass 2020", chapter 5.5	

Colormetric properties				
		1 mm	2 mm	3 mm
Illuminant D65	x	0,487	0,711	0,731
	y	0,305	0,272	0,268
	Y	3,2	0,8	0,5
	$\lambda_d$	654 nm	662 nm	668 nm
Illuminant A	$P_e$	0,420	0,954	0,998
	x	0,631	0,726	0,732
	y	0,318	0,272	0,268
	Y	4,5	1,6	1,2
	$\lambda_d$	656 nm	664 nm	671 nm
	$P_e$	0,654	0,982	0,999

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



## RG665



**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	9,809E-01	1100	9,760E-01	2200	9,661E-01	3700	2,872E-01
210	< 1,0E-05	510	< 1,000E-05	810	9,804E-01	1110	9,762E-01	2250	9,623E-01	3750	2,991E-01
220	< 1,0E-05	520	< 1,000E-05	820	9,799E-01	1120	9,764E-01	2300	9,655E-01	3800	3,090E-01
230	< 1,0E-05	530	< 1,000E-05	830	9,793E-01	1130	9,766E-01	2350	9,666E-01	3850	3,173E-01
240	< 1,0E-05	540	< 1,000E-05	840	9,788E-01	1140	9,768E-01	2400	9,646E-01	3900	3,241E-01
250	< 1,0E-05	550	< 1,000E-05	850	9,782E-01	1150	9,770E-01	2450	9,594E-01	3950	3,273E-01
260	< 1,0E-05	560	< 1,000E-05	860	9,777E-01	1160	9,772E-01	2500	9,503E-01	4000	3,259E-01
270	< 1,0E-05	570	< 1,000E-05	870	9,772E-01	1170	9,775E-01	2550	9,434E-01	4050	3,147E-01
280	< 1,0E-05	580	< 1,000E-05	880	9,767E-01	1180	9,777E-01	2600	9,403E-01	4100	2,940E-01
290	< 1,0E-05	590	< 1,000E-05	890	9,763E-01	1190	9,780E-01	2650	9,310E-01	4150	2,697E-01
300	< 1,0E-05	600	< 1,000E-05	900	9,759E-01	1200	9,783E-01	2700	8,797E-01	4200	2,395E-01
310	< 1,0E-05	610	< 1,000E-05	910	9,756E-01	1250	9,797E-01	2750	5,478E-01	4250	2,072E-01
320	< 1,000E-05	620	< 1,000E-05	920	9,754E-01	1300	9,814E-01	2800	3,680E-01	4300	1,688E-01
330	< 1,000E-05	630	7,438E-05	930	9,752E-01	1350	9,832E-01	2850	3,399E-01	4350	1,267E-01
340	< 1,000E-05	640	4,275E-03	940	9,751E-01	1400	9,835E-01	2900	3,380E-01	4400	8,260E-02
350	< 1,000E-05	650	7,177E-02	950	9,750E-01	1450	9,860E-01	2950	3,359E-01	4450	4,350E-02
360	< 1,000E-05	660	3,297E-01	960	9,749E-01	1500	9,883E-01	3000	3,259E-01	4500	1,970E-02
370	< 1,000E-05	670	6,426E-01	970	9,748E-01	1550	9,896E-01	3050	3,067E-01	4550	9,240E-03
380	< 1,000E-05	680	8,339E-01	980	9,748E-01	1600	9,904E-01	3100	2,847E-01	4600	3,528E-03
390	< 1,000E-05	690	9,205E-01	990	9,748E-01	1650	9,903E-01	3150	2,670E-01	4650	1,277E-03
400	< 1,000E-05	700	9,567E-01	1000	9,748E-01	1700	9,895E-01	3200	2,501E-01	4700	4,966E-04
410	< 1,000E-05	710	9,719E-01	1010	9,748E-01	1750	9,882E-01	3250	2,347E-01	4750	2,028E-04
420	< 1,000E-05	720	9,788E-01	1020	9,749E-01	1800	9,869E-01	3300	2,224E-01	4800	8,730E-05
430	< 1,000E-05	730	9,817E-01	1030	9,750E-01	1850	9,856E-01	3350	2,148E-01	4850	4,477E-05
440	< 1,000E-05	740	9,826E-01	1040	9,751E-01	1900	9,844E-01	3400	2,144E-01	4900	2,472E-05
450	< 1,000E-05	750	9,828E-01	1050	9,752E-01	1950	9,835E-01	3450	2,198E-01	4950	1,183E-05
460	< 1,000E-05	760	9,826E-01	1060	9,754E-01	2000	9,828E-01	3500	2,290E-01	5000	< 1,000E-05
470	< 1,000E-05	770	9,822E-01	1070	9,755E-01	2050	9,822E-01	3550	2,412E-01	5050	< 1,000E-05
480	< 1,000E-05	780	9,818E-01	1080	9,757E-01	2100	9,811E-01	3600	2,577E-01	5100	< 1,000E-05
490	< 1,000E-05	790	9,814E-01	1090	9,758E-01	2150	9,781E-01	3650	2,734E-01	5150	< 1,000E-05