

## RG9

Optical properties	
<b>Reflection factor</b>	
$P_d = 0,920$	
<b>Spectral values guaranteed</b>	
$\tau_i$ (720 nm)	$\leq 0,45$
$\tau_i$ (800 nm)	$\geq 0,92$
$\tau_i$ (1060 nm)	$\leq 0,4$
<b>Refractive indices</b>	
$n_F$ (486 nm)	= 1,52
$n_e$ (546 nm)	= 1,52
$n_d$ (587,6 nm)	= 1,51
<b>Sellmeier coefficients</b>	
valid from 440 nm to 1550 nm	
$B_1$	0,6332
$B_2$	0,6287
$B_3$	64,3526
$C_1$	9,656E-03 $\mu\text{m}^2$
$C_2$	9,6564E-03 $\mu\text{m}^2$
$C_3$	7257,357 $\mu\text{m}^2$
<b>Internal quality</b>	
Bubble class	3

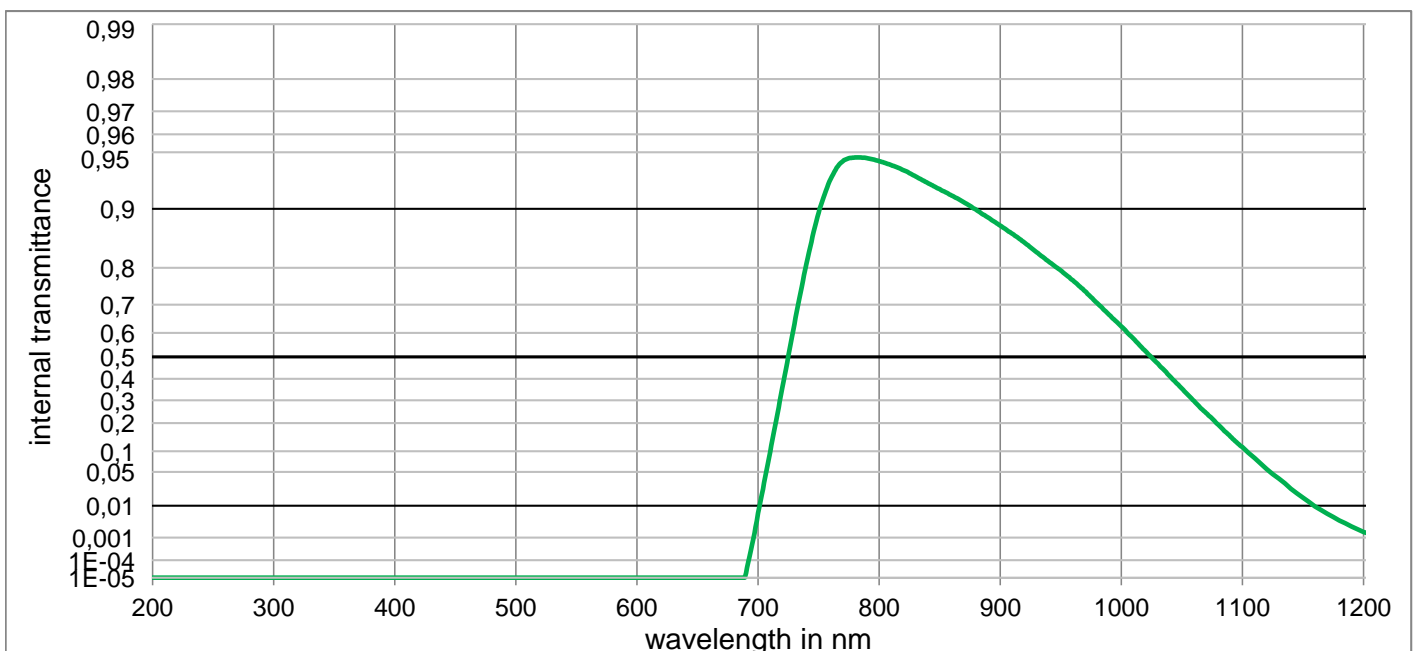
Mechanical properties	
<b>Reference thickness</b>	
$d = 3,00 \text{ mm}$	
<b>Density</b>	
$\rho = 2,58 \text{ g/cm}^3$	
<b>Knoop hardness</b>	
HK[0.1/20] = 459	

Thermal properties	
<b>Transformation temperature</b>	
$T_g = 519 \text{ }^\circ\text{C}$	
<b>Thermal expansion in</b> $10^{-6}/\text{K}$	
$\alpha$ (-30°C/+70°C)	= 7,9
$\alpha$ (20°C/300°C)	= 9,0
<b>Temperature coefficient</b>	
$Tk = 0,06 \text{ nm/K}$	

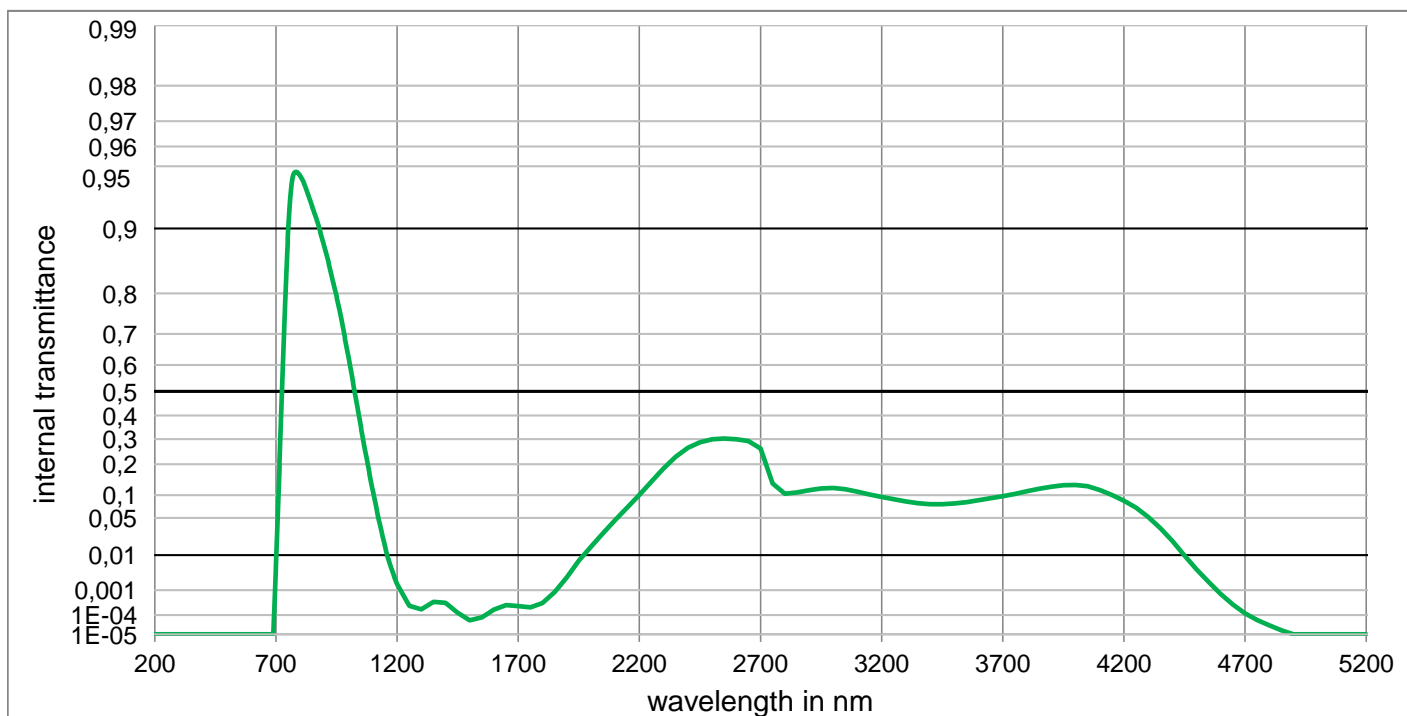
Chemical properties	
<b>Chemical resistance</b>	
FR class	= 0
SR class	= 1
AR class	= 1
<b>Resistance against humidity</b>	
Robust glass	
see pocket catalogue "Optical Filter Glass 2020", chapter 5.5	

Colormetric properties				
		1 mm	2 mm	3 mm
Illuminant D65	x			
	y			
	Y			
	$\lambda_d$			
	$P_e$			
Illuminant A	x			
	y			
	Y			
	$\lambda_d$			
	$P_e$			

Notes	
Bandpass filter / Longpass filter	
DIN 58131	
<b>Disclaimer</b>	
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	< 1,000E-05	800	9,442E-01	1100	1,124E-01	2200	1,008E-01	3700	9,734E-02
210	< 1,0E-05	510	< 1,000E-05	810	9,414E-01	1110	8,093E-02	2250	1,400E-01	3750	1,032E-01
220	< 1,0E-05	520	< 1,000E-05	820	9,377E-01	1120	5,559E-02	2300	1,844E-01	3800	1,105E-01
230	< 1,0E-05	530	< 1,000E-05	830	9,327E-01	1130	3,853E-02	2350	2,288E-01	3850	1,182E-01
240	< 1,0E-05	540	< 1,000E-05	840	9,271E-01	1140	2,454E-02	2400	2,643E-01	3900	1,239E-01
250	< 1,0E-05	550	< 1,000E-05	850	9,212E-01	1150	1,553E-02	2450	2,870E-01	3950	1,281E-01
260	< 1,0E-05	560	< 1,000E-05	860	9,148E-01	1160	9,600E-03	2500	2,997E-01	4000	1,292E-01
270	< 1,0E-05	570	< 1,000E-05	870	9,076E-01	1170	6,124E-03	2550	3,020E-01	4050	1,255E-01
280	< 1,0E-05	580	< 1,000E-05	880	8,989E-01	1180	3,890E-03	2600	2,991E-01	4100	1,144E-01
290	< 1,0E-05	590	< 1,000E-05	890	8,889E-01	1190	2,500E-03	2650	2,922E-01	4150	1,006E-01
300	< 1,0E-05	600	< 1,000E-05	900	8,776E-01	1200	1,611E-03	2700	2,612E-01	4200	8,570E-02
310	< 1,0E-05	610	< 1,000E-05	910	8,651E-01	1250	2,518E-04	2750	1,342E-01	4250	6,981E-02
320	< 1,000E-05	620	< 1,000E-05	920	8,505E-01	1300	1,782E-04	2800	1,042E-01	4300	5,190E-02
330	< 1,000E-05	630	< 1,000E-05	930	8,328E-01	1350	3,698E-04	2850	1,074E-01	4350	3,430E-02
340	< 1,000E-05	640	< 1,000E-05	940	8,137E-01	1400	3,388E-04	2900	1,136E-01	4400	2,019E-02
350	< 1,000E-05	650	< 1,000E-05	950	7,936E-01	1450	1,272E-04	2950	1,185E-01	4450	9,760E-03
360	< 1,000E-05	660	< 1,000E-05	960	7,697E-01	1500	5,674E-05	3000	1,203E-01	4500	4,410E-03
370	< 1,000E-05	670	< 1,000E-05	970	7,403E-01	1550	7,805E-05	3050	1,164E-01	4550	1,840E-03
380	< 1,000E-05	680	< 1,000E-05	980	7,052E-01	1600	1,738E-04	3100	1,094E-01	4600	7,240E-04
390	< 1,000E-05	690	1,925E-05	990	6,662E-01	1650	2,710E-04	3150	1,016E-01	4650	2,825E-04
400	< 1,000E-05	700	6,397E-03	1000	6,249E-01	1700	2,449E-04	3200	9,522E-02	4700	1,191E-04
410	< 1,000E-05	710	9,896E-02	1010	5,770E-01	1750	2,216E-04	3250	8,942E-02	4750	5,808E-05
420	< 1,000E-05	720	3,571E-01	1020	5,244E-01	1800	3,322E-04	3300	8,429E-02	4800	3,162E-05
430	< 1,000E-05	730	6,334E-01	1030	4,702E-01	1850	8,561E-04	3350	7,998E-02	4850	1,690E-05
440	< 1,000E-05	740	8,095E-01	1040	4,126E-01	1900	2,534E-03	3400	7,746E-02	4900	< 1,000E-05
450	< 1,000E-05	750	8,952E-01	1050	3,537E-01	1950	7,370E-03	3450	7,752E-02	4950	< 1,000E-05
460	< 1,000E-05	760	9,306E-01	1060	2,968E-01	2000	1,525E-02	3500	7,945E-02	5000	< 1,000E-05
470	< 1,000E-05	770	9,442E-01	1070	2,425E-01	2050	2,800E-02	3550	8,240E-02	5050	< 1,000E-05
480	< 1,000E-05	780	9,467E-01	1080	1,938E-01	2100	4,638E-02	3600	8,704E-02	5100	< 1,000E-05
490	< 1,000E-05	790	9,462E-01	1090	1,483E-01	2150	7,040E-02	3650	9,214E-02	5150	< 1,000E-05