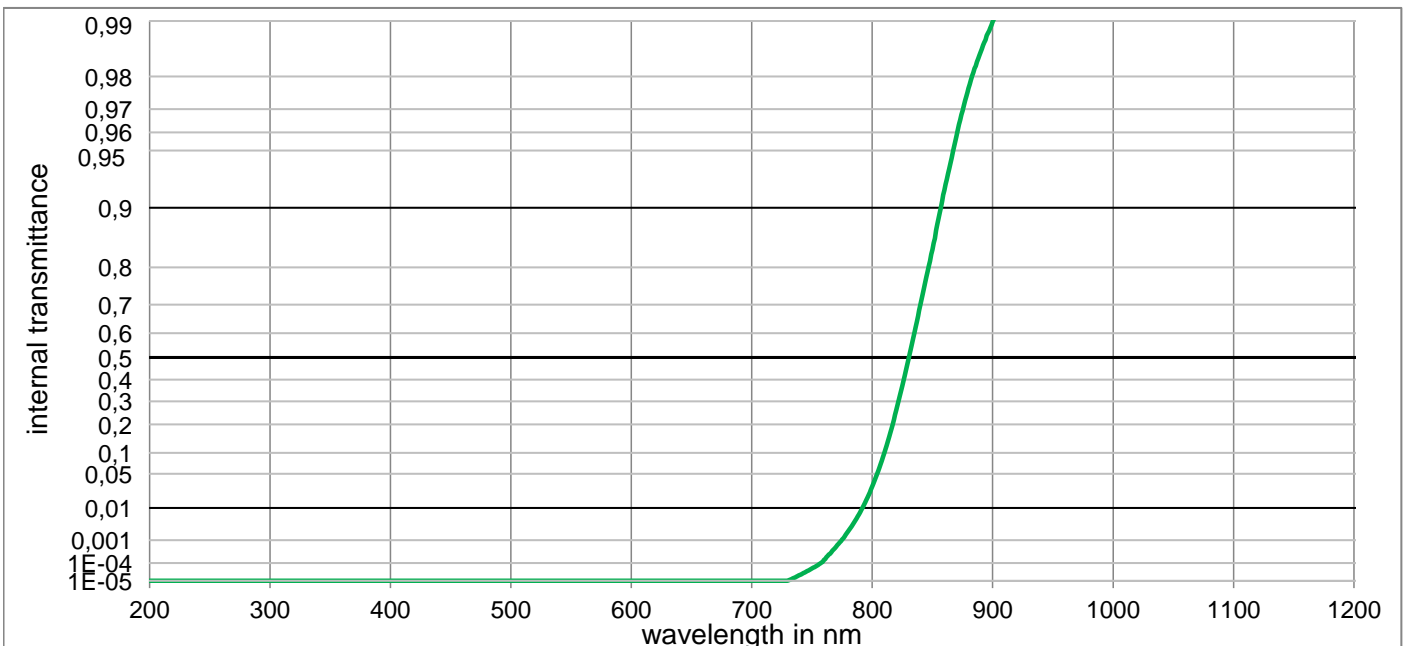
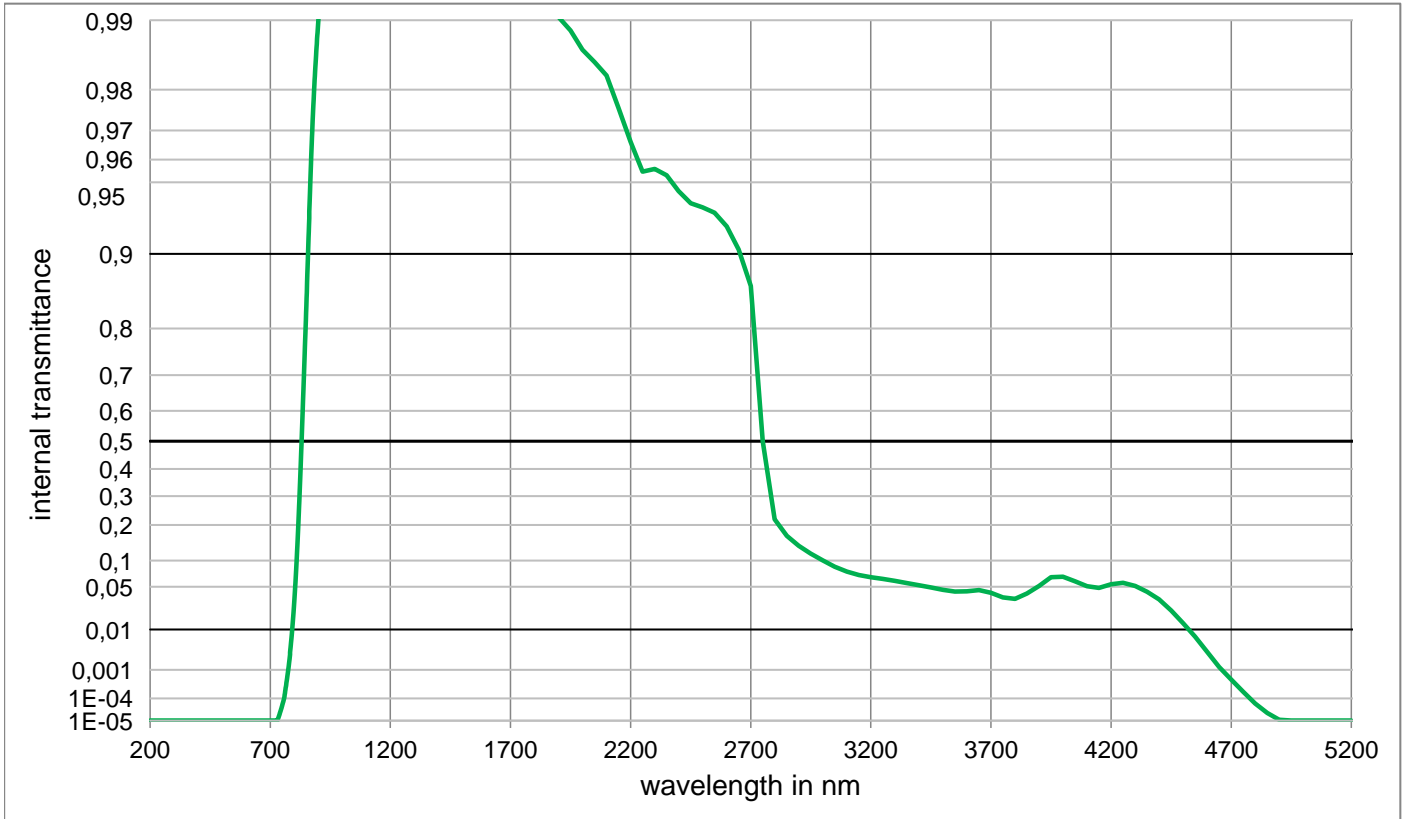


## RG830

Optical properties	Mechanical properties	Colorimetric properties	
<b>Reflection factor</b>	<b>Reference thickness</b>	1 mm    2 mm    3 mm	
$P_d = 0,909$	$d = 3,00 \text{ mm}$	Illuminant D65 x y Y $\lambda_d$ $P_e$	
<b>Spectral values guaranteed (d = 3 mm)</b>	<b>Density</b>		Illuminant A x y Y $\lambda_d$ $P_e$
$\lambda_{i0,5} = 830 \text{ nm} \pm 9 \text{ nm}$	$\rho = 2,94 \text{ g/cm}^3$		
$\lambda_s (\tau_{i,U} = 1E-05) = 670 \text{ nm}$	<b>Knoop hardness</b>		
$\lambda_p (\tau_{i,L} = 0,97) = 950 \text{ nm}$	$HK_{[0,1/20]} = 436$		
	<b>Thermal properties</b>		
	<b>Transformation temperature</b>		
	$T_g = 554 \text{ °C}$		
	<b>Thermal expansion in <math>10^{-6}/K</math></b>		
	$\alpha_{(-30^\circ C/+70^\circ C)} = 9,5$		
	$\alpha_{(20^\circ C/300^\circ C)} = 10,5$		
	<b>Temperature coefficient</b>		
	$Tk = 0,23 \text{ nm/K}$		
<b>Refractive indices</b>	<b>Chemical properties</b>	<b>Notes</b>	
$n_d (587,6 \text{ nm}) = 1,56$	<b>Chemical resistance</b>	Stricking glass	
$n_s (852 \text{ nm}) = 1,55$	FR class = 5	Longpass filter	
$n_t (1014 \text{ nm}) = 1,55$	SR class = 53.4		
	AR class = 1.3		
<b>Sellmeier coefficients</b>	<b>Resistance against humidity</b>	ISO 23364:2021	
on request	Robust glass	<b>Disclaimer</b>	
	see pocket catalogue "Optical Filter Glass 2024", chapter 5.5	All data without tolerances are to be understood to be reference values.	
<b>Internal quality</b>			
Bubble class    3			



## RG830



**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	2,968E-02	1100	9,971E-01	2200	9,664E-01	3700	4,138E-02
210	< 1,0E-05	510	< 1,000E-05	810	9,936E-02	1110	9,971E-01	2250	9,550E-01	3750	3,550E-02
220	< 1,0E-05	520	< 1,000E-05	820	2,604E-01	1120	9,972E-01	2300	9,562E-01	3800	3,400E-02
230	< 1,0E-05	530	< 1,000E-05	830	4,901E-01	1130	9,973E-01	2350	9,533E-01	3850	4,058E-02
240	< 1,0E-05	540	< 1,000E-05	840	6,987E-01	1140	9,973E-01	2400	9,455E-01	3900	5,135E-02
250	< 1,0E-05	550	< 1,000E-05	850	8,366E-01	1150	9,974E-01	2450	9,387E-01	3950	6,590E-02
260	< 1,0E-05	560	< 1,000E-05	860	9,189E-01	1160	9,975E-01	2500	9,361E-01	4000	6,660E-02
270	< 1,0E-05	570	< 1,000E-05	870	9,582E-01	1170	9,976E-01	2550	9,326E-01	4050	5,851E-02
280	< 1,0E-05	580	< 1,000E-05	880	9,768E-01	1180	9,976E-01	2600	9,232E-01	4100	5,083E-02
290	< 1,0E-05	590	< 1,000E-05	890	9,852E-01	1190	9,977E-01	2650	9,041E-01	4150	4,831E-02
300	< 1,0E-05	600	< 1,000E-05	900	9,899E-01	1200	9,978E-01	2700	8,646E-01	4200	5,371E-02
310	< 1,0E-05	610	< 1,000E-05	910	9,927E-01	1250	9,983E-01	2750	5,000E-01	4250	5,637E-02
320	< 1,000E-05	620	< 1,000E-05	920	9,943E-01	1300	9,989E-01	2800	2,183E-01	4300	5,122E-02
330	< 1,000E-05	630	< 1,000E-05	930	9,951E-01	1350	9,997E-01	2850	1,663E-01	4350	4,271E-02
340	< 1,000E-05	640	< 1,000E-05	940	9,954E-01	1400	9,985E-01	2900	1,371E-01	4400	3,328E-02
350	< 1,000E-05	650	< 1,000E-05	950	9,956E-01	1450	9,987E-01	2950	1,170E-01	4450	2,234E-02
360	< 1,000E-05	660	< 1,000E-05	960	9,958E-01	1500	9,998E-01	3000	1,002E-01	4500	1,333E-02
370	< 1,000E-05	670	< 1,000E-05	970	9,959E-01	1550	9,999E-01	3050	8,620E-02	4550	7,120E-03
380	< 1,000E-05	680	< 1,000E-05	980	9,960E-01	1600	9,997E-01	3100	7,650E-02	4600	3,120E-03
390	< 1,000E-05	690	< 1,000E-05	990	9,961E-01	1650	9,984E-01	3150	6,962E-02	4650	1,208E-03
400	< 1,000E-05	700	< 1,000E-05	1000	9,962E-01	1700	9,965E-01	3200	6,599E-02	4700	4,875E-04
410	< 1,000E-05	710	< 1,000E-05	1010	9,963E-01	1750	9,942E-01	3250	6,294E-02	4750	1,828E-04
420	< 1,000E-05	720	< 1,000E-05	1020	9,964E-01	1800	9,924E-01	3300	5,949E-02	4800	6,152E-05
430	< 1,000E-05	730	1,025E-05	1030	9,965E-01	1850	9,911E-01	3350	5,595E-02	4850	2,366E-05
440	< 1,000E-05	740	2,262E-05	1040	9,966E-01	1900	9,903E-01	3400	5,237E-02	4900	1,099E-05
450	< 1,000E-05	750	5,207E-05	1050	9,967E-01	1950	9,889E-01	3450	4,889E-02	4950	< 1,000E-05
460	< 1,000E-05	760	1,421E-04	1060	9,967E-01	2000	9,866E-01	3500	4,561E-02	5000	< 1,000E-05
470	< 1,000E-05	770	5,562E-04	1070	9,968E-01	2050	9,848E-01	3550	4,294E-02	5050	< 1,000E-05
480	< 1,000E-05	780	2,044E-03	1080	9,969E-01	2100	9,826E-01	3600	4,356E-02	5100	< 1,000E-05
490	< 1,000E-05	790	7,784E-03	1090	9,970E-01	2150	9,760E-01	3650	4,528E-02	5150	< 1,000E-05