

# Data Sheet



## RG850

Density	
$\rho$ [g/cm <sup>3</sup> ]	2.93

Notes
Colloidally colored glass
Longpass filter

Reflection factor	
$P_d$	0.909

Bubble content	
Bubble class	3

Reference thickness	
d [mm]	3

Chemical Resistance	
FR class	5.0
SR class	53.4
AR class	1.3

Spectral values guaranteed	
$\lambda_c$ ( $\tau_i = 0.5$ ) [nm]	= 850 ± 9
$\lambda_s$ ( $\tau_{i,U} = 0.00001$ ) [nm]	= 700
$\lambda_p$ ( $\tau_{i,L} = 0.9$ ) [nm]	= 950
$\lambda_p$ ( $\tau_{i,L} = 0.97$ ) [nm]	= 1200

Transformation temperature	
$T_g$ [°C]	554

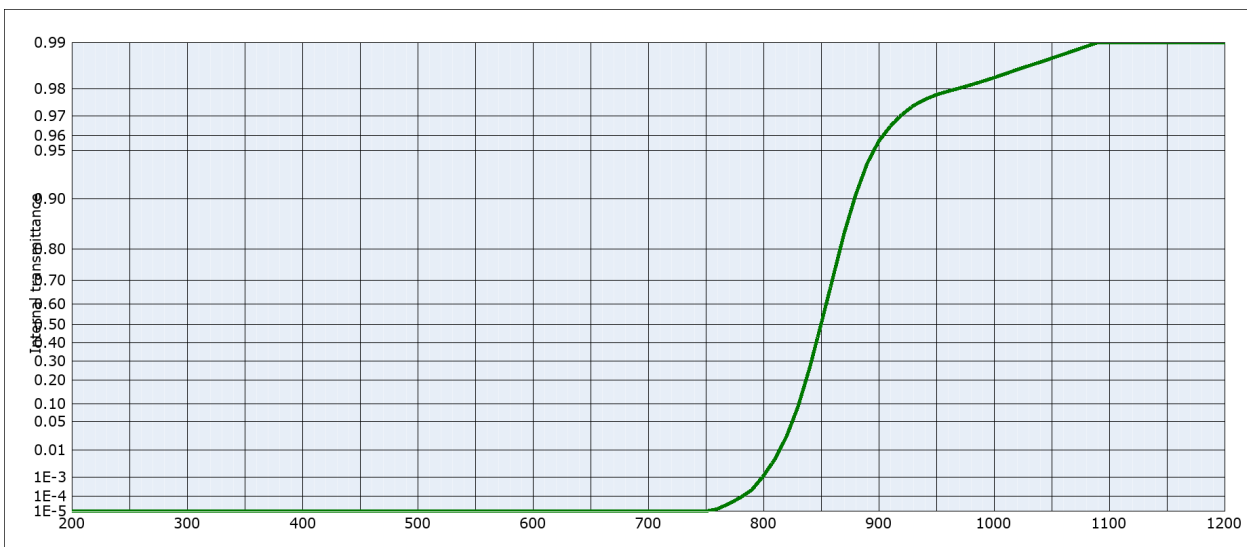
Thermal expansion	
$\alpha_{30/+70^\circ\text{C}}$ [10 <sup>-6</sup> /K]	9.5
$\alpha_{20/300^\circ\text{C}}$ [10 <sup>-6</sup> /K]	10.5
$\alpha_{20/200^\circ\text{C}}$ [10 <sup>-6</sup> /K]	

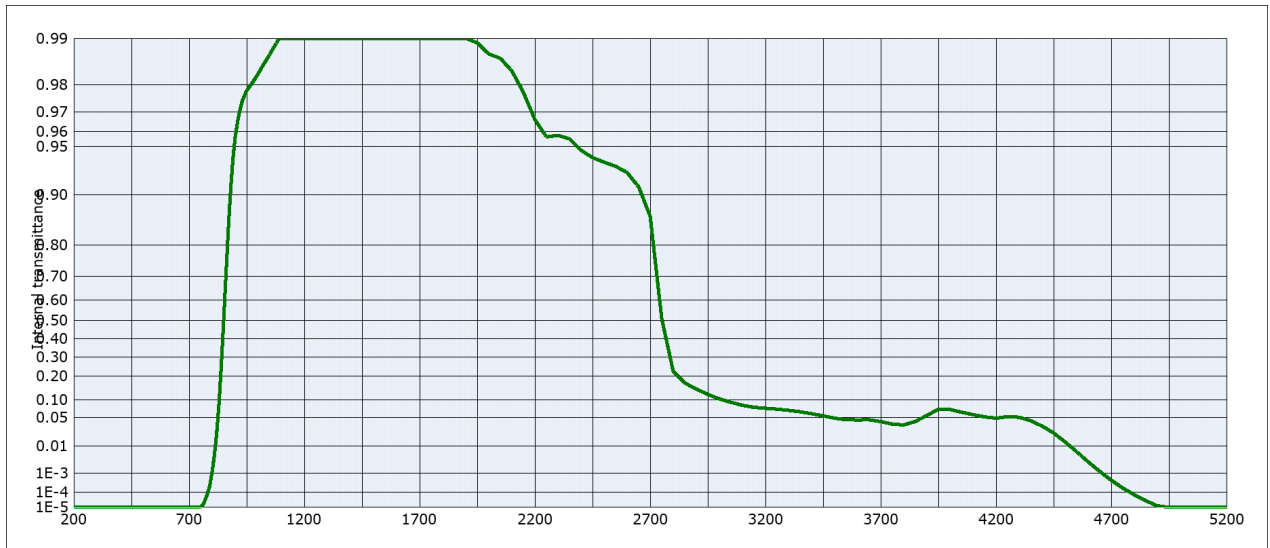
Refractive Index n	
$n_d$ (587.6 nm) =	1.560
$n_s$ (852.1 nm) =	1.550
$n_i$ (1014.0 nm) =	1.550

Temperature coefficient	
$T_K$ [nm/°C]	0.24

All data without tolerances are to be understood to be reference values.  
Guaranteed values are only those values listed in the section "Spectral values guaranteed".

Colorimetric evaluation												
Illuminant	A (Planck T = 2856 K)			Illuminant	Planck T = 3200 K			Illuminant	D65 (T <sub>C</sub> = 6504 K)			
d [mm]	1	2	3	d [mm]	1	2	3	d [mm]	1	2	3	
x				x				x				
y				y				y				
Y				Y				Y				
$\lambda_d$ [nm]				$\lambda_d$ [nm]				$\lambda_d$ [nm]				
$P_e$				$P_e$				$P_e$				





**Internal transmittance  $\tau_i$  at reference thickness  $d = 3 \text{ mm}$**   
**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	$< 10^{-5}$	500	$< 10^{-5}$	800	$1.2 \cdot 10^{-3}$	1100	0.990	2200	0.966	3700	$4.2 \cdot 10^{-2}$
210	$< 10^{-5}$	510	$< 10^{-5}$	810	$5.3 \cdot 10^{-3}$	1110	0.991	2250	0.957	3750	$3.7 \cdot 10^{-2}$
220	$< 10^{-5}$	520	$< 10^{-5}$	820	$2.4 \cdot 10^{-2}$	1120	0.991	2300	0.958	3800	$3.5 \cdot 10^{-2}$
230	$< 10^{-5}$	530	$< 10^{-5}$	830	$9.1 \cdot 10^{-2}$	1130	0.992	2350	0.956	3850	$4.2 \cdot 10^{-2}$
240	$< 10^{-5}$	540	$< 10^{-5}$	840	0.261	1140	0.992	2400	0.947	3900	$5.5 \cdot 10^{-2}$
250	$< 10^{-5}$	550	$< 10^{-5}$	850	0.500	1150	0.993	2450	0.941	3950	$7.2 \cdot 10^{-2}$
260	$< 10^{-5}$	560	$< 10^{-5}$	860	0.704	1160	0.993	2500	0.937	4000	$7.1 \cdot 10^{-2}$
270	$< 10^{-5}$	570	$< 10^{-5}$	870	0.838	1170	0.994	2550	0.934	4050	$6.3 \cdot 10^{-2}$
280	$< 10^{-5}$	580	$< 10^{-5}$	880	0.905	1180	0.994	2600	0.927	4100	$5.7 \cdot 10^{-2}$
290	$< 10^{-5}$	590	$< 10^{-5}$	890	0.940	1190	0.994	2650	0.911	4150	$5.2 \cdot 10^{-2}$
300	$< 10^{-5}$	600	$< 10^{-5}$	900	0.957	1200	0.995	2700	0.865	4200	$4.9 \cdot 10^{-2}$
310	$< 10^{-5}$	610	$< 10^{-5}$	910	0.965	1250	0.996	2750	0.510	4250	$5.2 \cdot 10^{-2}$
320	$< 10^{-5}$	620	$< 10^{-5}$	920	0.971	1300	0.997	2800	0.224	4300	$5.1 \cdot 10^{-2}$
330	$< 10^{-5}$	630	$< 10^{-5}$	930	0.974	1350	0.998	2850	0.169	4350	$4.4 \cdot 10^{-2}$
340	$< 10^{-5}$	640	$< 10^{-5}$	940	0.977	1400	0.997	2900	0.143	4400	$3.3 \cdot 10^{-2}$
350	$< 10^{-5}$	650	$< 10^{-5}$	950	0.978	1450	0.998	2950	0.121	4450	$2.3 \cdot 10^{-2}$
360	$< 10^{-5}$	660	$< 10^{-5}$	960	0.979	1500	1.000	3000	0.104	4500	$1.3 \cdot 10^{-2}$
370	$< 10^{-5}$	670	$< 10^{-5}$	970	0.980	1550	1.000	3050	$9.3 \cdot 10^{-2}$	4550	$6.8 \cdot 10^{-3}$
380	$< 10^{-5}$	680	$< 10^{-5}$	980	0.981	1600	1.000	3100	$8.3 \cdot 10^{-2}$	4600	$3.0 \cdot 10^{-3}$
390	$< 10^{-5}$	690	$< 10^{-5}$	990	0.982	1650	0.999	3150	$7.7 \cdot 10^{-2}$	4650	$1.2 \cdot 10^{-3}$
400	$< 10^{-5}$	700	$< 10^{-5}$	1000	0.983	1700	0.997	3200	$7.4 \cdot 10^{-2}$	4700	$4.7 \cdot 10^{-4}$
410	$< 10^{-5}$	710	$< 10^{-5}$	1010	0.984	1750	0.995	3250	$7.2 \cdot 10^{-2}$	4750	$1.8 \cdot 10^{-4}$
420	$< 10^{-5}$	720	$< 10^{-5}$	1020	0.985	1800	0.993	3300	$6.8 \cdot 10^{-2}$	4800	$7.2 \cdot 10^{-5}$
430	$< 10^{-5}$	730	$< 10^{-5}$	1030	0.986	1850	0.992	3350	$6.4 \cdot 10^{-2}$	4850	$3.0 \cdot 10^{-5}$
440	$< 10^{-5}$	740	$< 10^{-5}$	1040	0.987	1900	0.991	3400	$5.9 \cdot 10^{-2}$	4900	$1.3 \cdot 10^{-5}$
450	$< 10^{-5}$	750	$< 10^{-5}$	1050	0.987	1950	0.989	3450	$5.4 \cdot 10^{-2}$	4950	$< 10^{-5}$
460	$< 10^{-5}$	760	$1.5 \cdot 10^{-5}$	1060	0.988	2000	0.987	3500	$4.9 \cdot 10^{-2}$	5000	$< 10^{-5}$
470	$< 10^{-5}$	770	$3.4 \cdot 10^{-5}$	1070	0.989	2050	0.987	3550	$4.5 \cdot 10^{-2}$	5050	$< 10^{-5}$
480	$< 10^{-5}$	780	$8.5 \cdot 10^{-5}$	1080	0.989	2100	0.984	3600	$4.5 \cdot 10^{-2}$	5100	$< 10^{-5}$
490	$< 10^{-5}$	790	$2.4 \cdot 10^{-4}$	1090	0.990	2150	0.978	3650	$4.5 \cdot 10^{-2}$	5150	$< 10^{-5}$