Data Sheet

OG590

Optical properties	
Reflection factor	
P_d	= 0,921
Spectral values guaranteed (d = 3 mm)	
λ_c (τ_i = 0,5)	= 590 nm ± 6 nm
λ_s ($\tau_{i,U}$ = 1E-05)	= 510 nm
λ_p ($\tau_{i,L}$ = 0,93)	= 660 nm
Refractive indices	
n_d (587,6 nm)	= 1,51
n_s (852 nm)	= 1,51
n_t (1014 nm)	= 1,50
Sellmeier coefficients	
on request	
Internal quality	
Bubble class	3

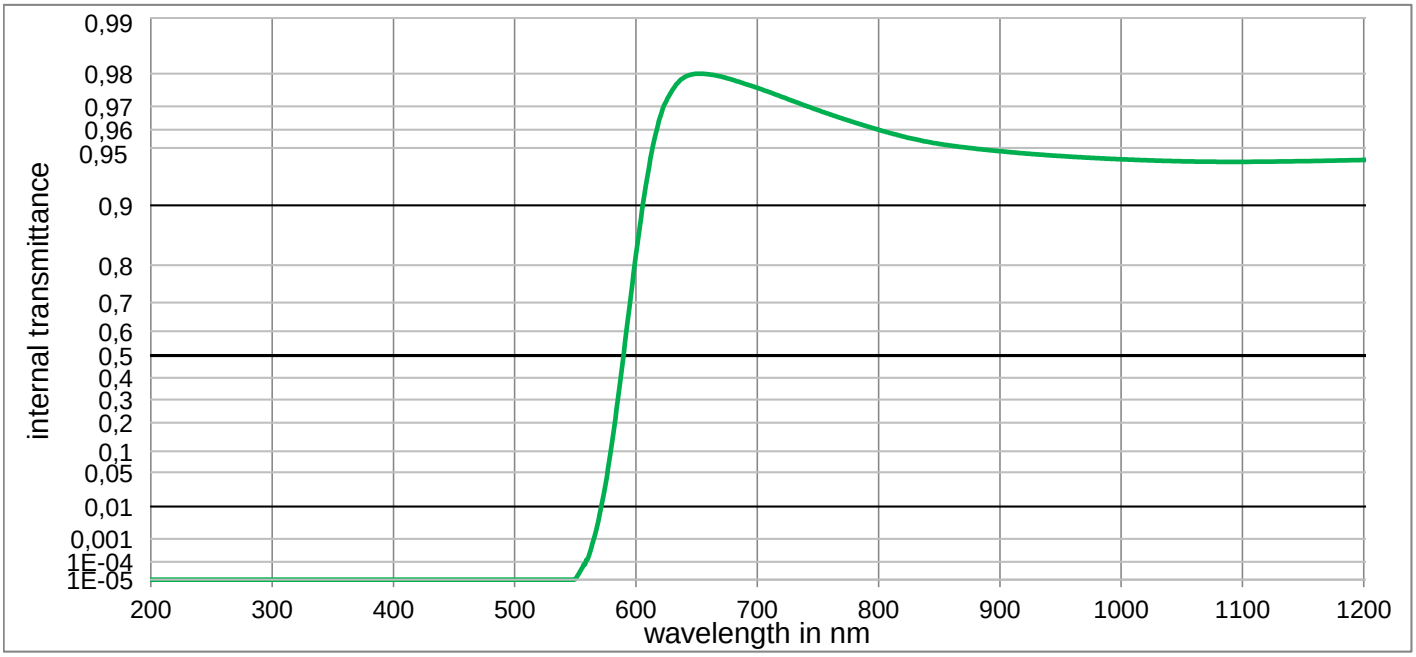
Mechanical properties	
Reference thickness	
d	= 3,00 mm
Density	
ρ	= 2,56 g/cm³
Knoop hardness	
$HK_{[0.1/20]}$	= 448

Thermal properties		
Transformation temperature		
Tg	= 506 °C	
Thermal expansion in		**10^{-6}/K**
$\alpha_{(-30°C/+70°C)}$	= 7,9	
$\alpha_{(20°C/300°C)}$	= 9,0	
Temperature coefficient		
Tk	= 0,13	nm/K

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

Colormetric properties				
		1 mm	2 mm	3 mm
Illuminant D65	x	0,610	0,652	0,661
	y	0,361	0,347	0,338
	Y	27,3	21,5	19,2
	λ_d	602 nm	606 nm	609 nm
	P_e	0,920	0,998	1,000
Illuminant A	x	0,639	0,662	0,669
	y	0,354	0,338	0,331
	Y	39,2	32,7	29,8
	λ_d	605 nm	609 nm	611 nm
	P_e	0,956	0,998	0,999

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



Data Sheet

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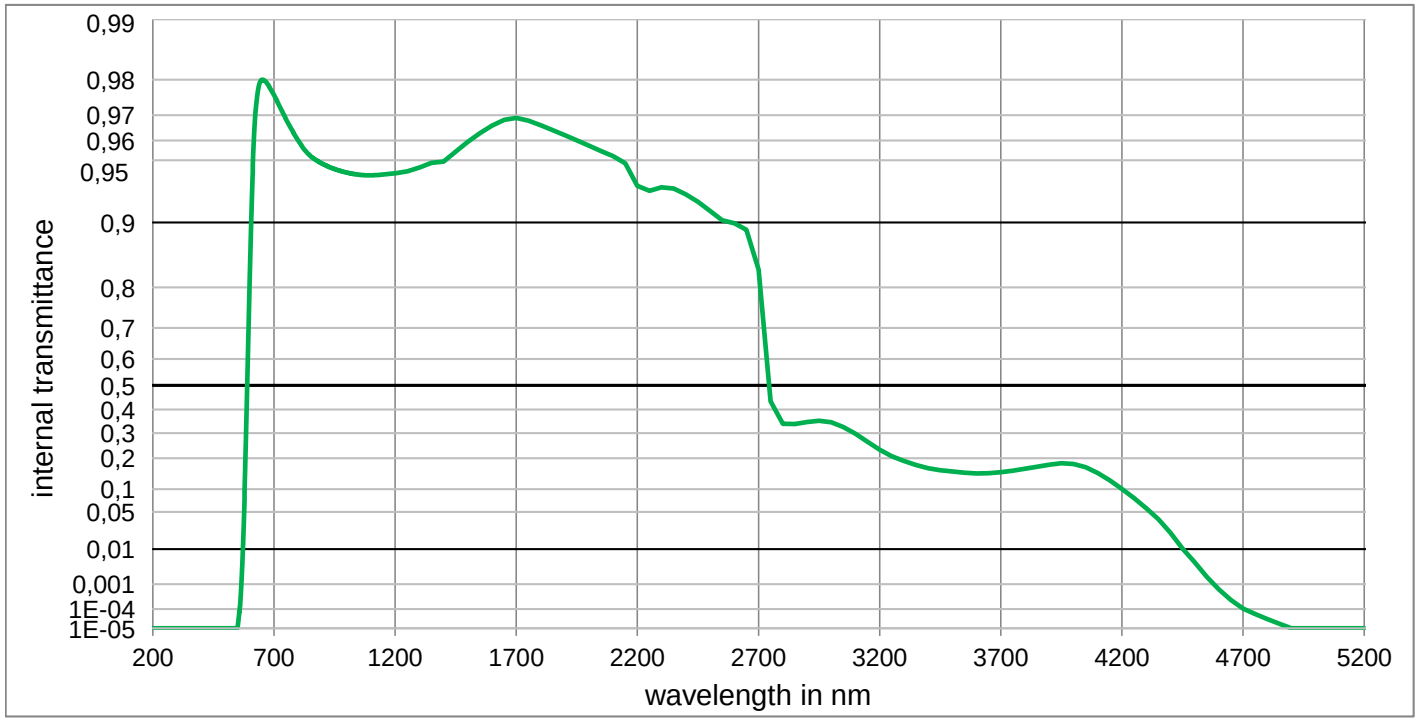

Internal transmittance ti at reference thickness
The internal transmittance values, tabulated and graphically represented, are reference values only

λ /nm	τ_i	λ /nm	τ_i	λ /nm	τ_i	λ /nm	τ_i	λ /nm	τ_i	λ /nm	τ_i
200	< 1,0E-05	500	< 1,000E-05	800	9,600E-01	1100	9,408E-01	2200	9,334E-01	3700	1,509E-01
210	< 1,0E-05	510	< 1,000E-05	810	9,583E-01	1110	9,408E-01	2250	9,295E-01	3750	1,558E-01
220	< 1,0E-05	520	< 1,000E-05	820	9,566E-01	1120	9,409E-01	2300	9,323E-01	3800	1,624E-01
230	< 1,0E-05	530	< 1,000E-05	830	9,551E-01	1130	9,410E-01	2350	9,313E-01	3850	1,697E-01
240	< 1,0E-05	540	< 1,000E-05	840	9,537E-01	1140	9,411E-01	2400	9,267E-01	3900	1,765E-01
250	< 1,0E-05	550	1,060E-05	850	9,524E-01	1150	9,413E-01	2450	9,205E-01	3950	1,813E-01
260	< 1,0E-05	560	1,311E-04	860	9,514E-01	1160	9,414E-01	2500	9,117E-01	4000	1,794E-01
270	< 1,0E-05	570	5,941E-03	870	9,504E-01	1170	9,416E-01	2550	9,024E-01	4050	1,678E-01
280	< 1,0E-05	580	1,208E-01	880	9,495E-01	1180	9,418E-01	2600	8,992E-01	4100	1,480E-01
290	< 1,0E-05	590	5,150E-01	890	9,488E-01	1190	9,420E-01	2650	8,917E-01	4150	1,246E-01
300	< 1,0E-05	600	8,226E-01	900	9,480E-01	1200	9,421E-01	2700	8,337E-01	4200	1,006E-01
310	< 1,0E-05	610	9,329E-01	910	9,473E-01	1250	9,434E-01	2750	4,344E-01	4250	7,750E-02
320	< 1,000E-05	620	9,658E-01	920	9,466E-01	1300	9,457E-01	2800	3,392E-01	4300	5,680E-02
330	< 1,000E-05	630	9,755E-01	930	9,459E-01	1350	9,485E-01	2850	3,381E-01	4350	3,854E-02
340	< 1,000E-05	640	9,791E-01	940	9,454E-01	1400	9,493E-01	2900	3,473E-01	4400	2,229E-02
350	< 1,000E-05	650	9,800E-01	950	9,448E-01	1450	9,547E-01	2950	3,524E-01	4450	1,033E-02
360	< 1,000E-05	660	9,798E-01	960	9,443E-01	1500	9,594E-01	3000	3,453E-01	4500	4,710E-03
370	< 1,000E-05	670	9,793E-01	970	9,438E-01	1550	9,632E-01	3050	3,252E-01	4550	1,742E-03
380	< 1,000E-05	680	9,784E-01	980	9,434E-01	1600	9,662E-01	3100	2,969E-01	4600	6,577E-04
390	< 1,000E-05	690	9,773E-01	990	9,430E-01	1650	9,684E-01	3150	2,648E-01	4650	2,483E-04
400	< 1,000E-05	700	9,762E-01	1000	9,426E-01	1700	9,690E-01	3200	2,322E-01	4700	1,059E-04
410	< 1,000E-05	710	9,748E-01	1010	9,422E-01	1750	9,681E-01	3250	2,078E-01	4750	5,728E-05
420	< 1,000E-05	720	9,734E-01	1020	9,419E-01	1800	9,664E-01	3300	1,899E-01	4800	3,214E-05
430	< 1,000E-05	730	9,718E-01	1030	9,416E-01	1850	9,645E-01	3350	1,755E-01	4850	1,832E-05
440	< 1,000E-05	740	9,702E-01	1040	9,414E-01	1900	9,623E-01	3400	1,643E-01	4900	< 1,000E-05
450	< 1,000E-05	750	9,686E-01	1050	9,412E-01	1950	9,600E-01	3450	1,571E-01	4950	< 1,000E-05
460	< 1,000E-05	760	9,669E-01	1060	9,410E-01	2000	9,576E-01	3500	1,528E-01	5000	< 1,000E-05
470	< 1,000E-05	770	9,652E-01	1070	9,409E-01	2050	9,550E-01	3550	1,494E-01	5050	< 1,000E-05
480	< 1,000E-05	780	9,635E-01	1080	9,408E-01	2100	9,523E-01	3600	1,469E-01	5100	< 1,000E-05
490	< 1,000E-05	790	9,617E-01	1090	9,408E-01	2150	9,482E-01	3650	1,478E-01	5150	< 1,000E-05