Data Sheet

BG40

Optical properties			
Reflection factor			
	P_d	=	0,916
Spectral values guaranteed			
τ_i (350 nm)		≥	0,8
τ_i (405 nm)		≥	0,93
τ_i (514 nm)		≥	0,97
τ_i (633 nm)		≤	0,57
τ_i (694 nm)		≤	0,16
τ_i (1060 nm)		≤	0,02
Refractive indices			
n_F (486 nm)		=	1,54
n_e (546 nm)		=	1,53
n_d (587,6 nm)		=	1,53
Sellmeier coefficients			
valid from 435 nm to 1550 nm			
B_1	0,9300		
B_2	0,3779		
B_3	1,0478		
C_1	8,617E-03	µm²	
C_2	1,0398E-02	µm²	
C_3	149,651	µm²	
Internal quality			
Bubble class	1		

Mechanical properties			
Reference thickness			
	d	=	1,00 mm
Density			
	ρ	=	2,74 g/cm³
Knoop hardness			
HK[0.1/20]		=	383

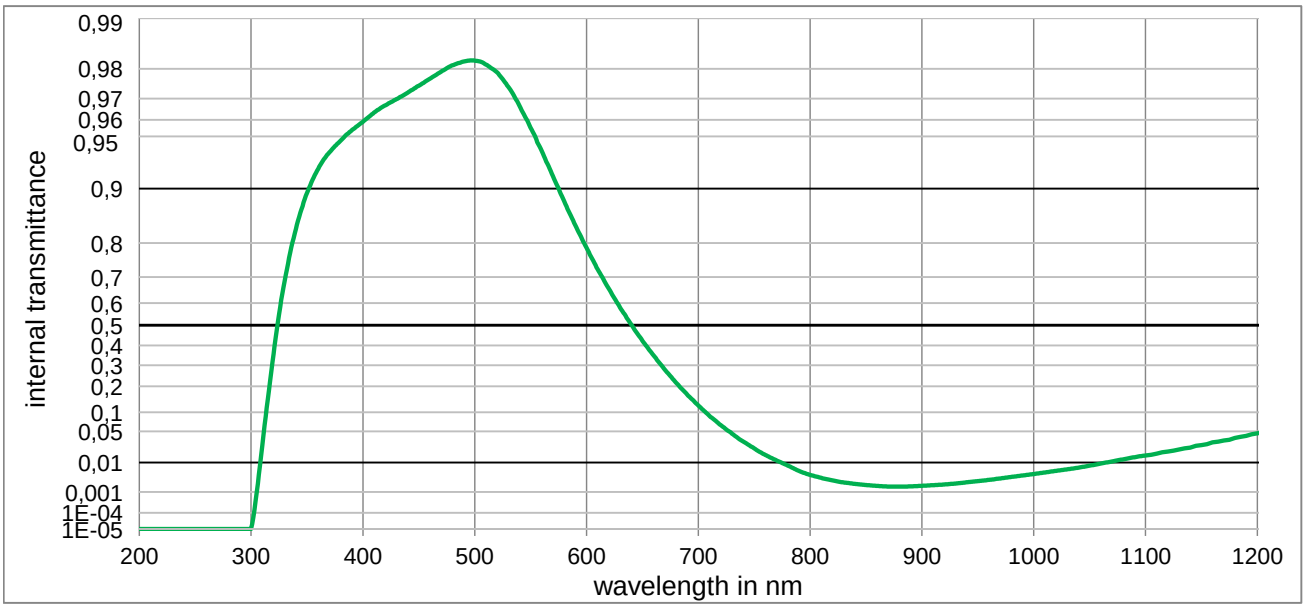
Thermal properties			
Transformation temperature			
	Tg	=	313 °C
Thermal expansion in			10^{-6}/K
$\alpha_{(-30°C/+70°C)}$		=	11,9
$\alpha_{(20°C/200°C)}$		=	13,7

Chemical properties			
Chemical resistance			
	FR class	=	0
	SR class	=	5.1
	AR class	=	3
Resistance against humidity			
Sensitive glass			
see pocket catalogue "Optical Filter Glass 2020", chapter 5.5			

Colormetric properties				
		1 mm	2 mm	3 mm
Illuminant D65	x	0,283	0,262	0,246
	y	0,327	0,324	0,321
	Y	82,1	74,8	69,0
	λ_d	491 nm	490 nm	490 nm
	P_e	0,108	0,188	0,250
Illuminant A	x	0,406	0,374	0,348
	y	0,421	0,430	0,436
	Y	78,0	68,4	61,3
	λ_d	501 nm	500 nm	500 nm
	P_e	0,094	0,168	0,227

Notes
Ionically colored glass
Bandpass filter / Shortpass filter
NIR cutoff filter
DIN 58131

Disclaimer
All data without tolerances are to be understood to be reference values.



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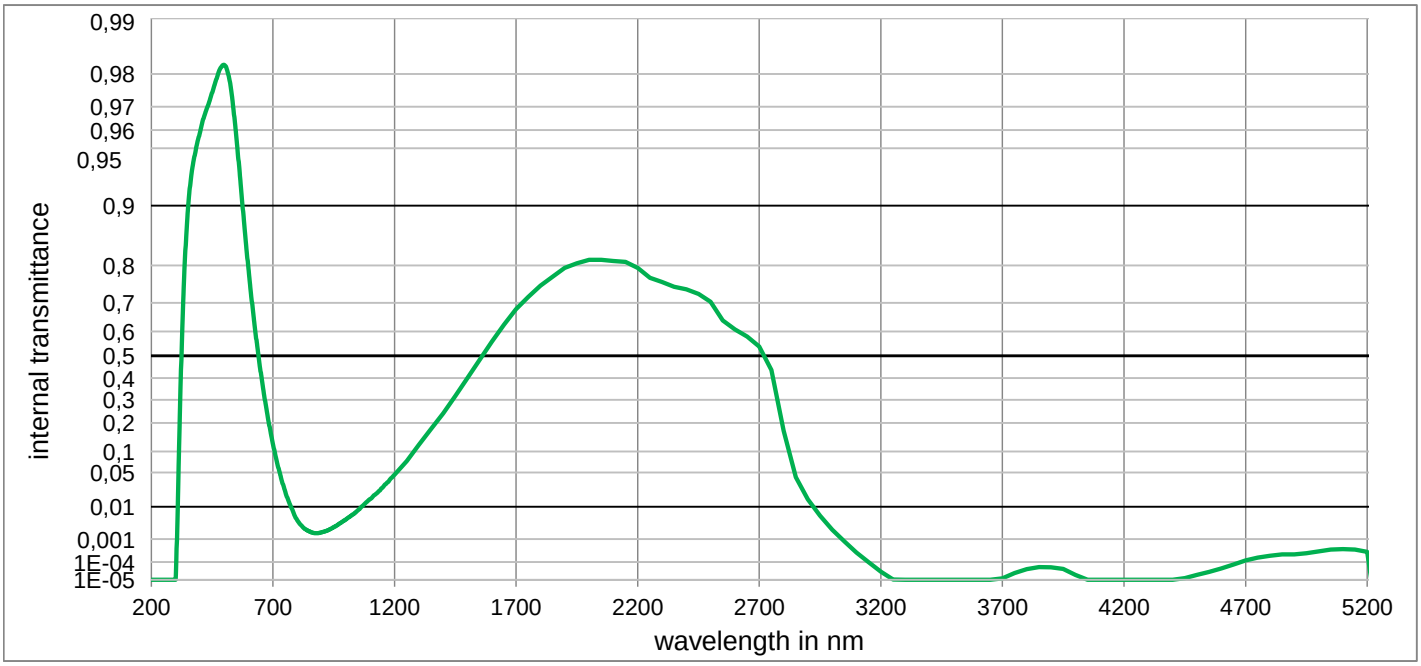

Internal transmittance ti at reference thickness
The internal transmittance values, tabulated and graphically represented, are reference values only

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	9,821E-01	800	4,252E-03	1100	1,533E-02	2200	7,945E-01	3700	1,213E-05
210	< 1,0E-05	510	9,812E-01	810	3,366E-03	1110	1,712E-02	2250	7,709E-01	3750	2,518E-05
220	< 1,0E-05	520	9,790E-01	820	2,780E-03	1120	1,901E-02	2300	7,600E-01	3800	4,169E-05
230	< 1,0E-05	530	9,745E-01	830	2,340E-03	1130	2,123E-02	2350	7,473E-01	3850	5,395E-05
240	< 1,0E-05	540	9,670E-01	840	2,062E-03	1140	2,354E-02	2400	7,400E-01	3900	5,333E-05
250	< 1,0E-05	550	9,556E-01	850	1,880E-03	1150	2,665E-02	2450	7,266E-01	3950	4,335E-05
260	< 1,0E-05	560	9,390E-01	860	1,734E-03	1160	3,051E-02	2500	7,030E-01	4000	2,000E-05
270	< 1,0E-05	570	9,150E-01	870	1,644E-03	1170	3,350E-02	2550	6,408E-01	4050	< 1,000E-05
280	< 1,0E-05	580	8,820E-01	880	1,622E-03	1180	3,747E-02	2600	6,079E-01	4100	< 1,000E-05
290	< 1,0E-05	590	8,400E-01	890	1,670E-03	1190	4,112E-02	2650	5,805E-01	4150	< 1,000E-05
300	< 1,0E-05	600	7,880E-01	900	1,752E-03	1200	4,588E-02	2700	5,400E-01	4200	< 1,000E-05
310	2,6E-02	610	7,260E-01	910	1,850E-03	1250	7,450E-02	2750	4,363E-01	4250	< 1,000E-05
320	3,560E-01	620	6,570E-01	920	1,964E-03	1300	1,200E-01	2800	1,700E-01	4300	< 1,000E-05
330	6,860E-01	630	5,810E-01	930	2,136E-03	1350	1,762E-01	2850	4,150E-02	4350	< 1,000E-05
340	8,320E-01	640	5,030E-01	940	2,360E-03	1400	2,400E-01	2900	1,510E-02	4400	< 1,000E-05
350	8,940E-01	650	4,240E-01	950	2,607E-03	1450	3,185E-01	2950	5,754E-03	4450	1,256E-05
360	9,230E-01	660	3,490E-01	960	2,880E-03	1500	4,000E-01	3000	2,153E-03	4500	2,000E-05
370	9,380E-01	670	2,790E-01	970	3,228E-03	1550	4,825E-01	3050	8,072E-04	4550	2,958E-05
380	9,470E-01	680	2,170E-01	980	3,631E-03	1600	5,600E-01	3100	2,818E-04	4600	4,645E-05
390	9,540E-01	690	1,650E-01	990	4,064E-03	1650	6,258E-01	3150	9,840E-05	4650	7,362E-05
400	9,590E-01	700	1,230E-01	1000	4,527E-03	1700	6,800E-01	3200	3,000E-05	4700	1,197E-04
410	9,638E-01	710	8,900E-02	1010	5,091E-03	1750	7,181E-01	3250	1,033E-05	4750	1,618E-04
420	9,671E-01	720	6,400E-02	1020	5,708E-03	1800	7,500E-01	3300	< 1,000E-05	4800	2,000E-04
430	9,698E-01	730	4,570E-02	1030	6,370E-03	1850	7,737E-01	3350	< 1,000E-05	4850	2,286E-04
440	9,723E-01	740	3,200E-02	1040	7,145E-03	1900	7,945E-01	3400	< 1,000E-05	4900	2,286E-04
450	9,748E-01	750	2,267E-02	1050	8,180E-03	1950	8,048E-01	3450	< 1,000E-05	4950	2,600E-04
460	9,771E-01	760	1,580E-02	1060	9,350E-03	2000	8,124E-01	3500	< 1,000E-05	5000	3,126E-04
470	9,792E-01	770	1,138E-02	1070	1,068E-02	2050	8,124E-01	3550	< 1,000E-05	5050	3,802E-04
480	9,809E-01	780	8,250E-03	1080	1,221E-02	2100	8,100E-01	3600	< 1,000E-05	5100	3,981E-04
490	9,819E-01	790	5,710E-03	1090	1,384E-02	2150	8,076E-01	3650	< 1,000E-05	5150	3,758E-04