Data Sheet

BG39

Optical properties			
Reflection factor			
	P_d	=	0,914
Spectral values guaranteed			
τ_i (350 nm)		≥	0,6
τ_i (405 nm)		≥	0,85
τ_i (514 nm)		≥	0,93
τ_i (633 nm)		≤	0,3
τ_i (694 nm)		≤	0,03
τ_i (1060 nm)		≤	0,001
Refractive indices			
n_F (486 nm)		=	1,542
n_e (546 nm)		=	1,538
n_d (587,6 nm)		=	1,536
Sellmeier coefficients			
valid from 440 nm to 1550 nm			
B_1			0,4382
B_2			0,8900
B_3			7,4825
C_1			2,508E-02 µm²
C_2			1,2201E-04 µm²
C_3			973,996 µm²
Internal quality			
Bubble class			2

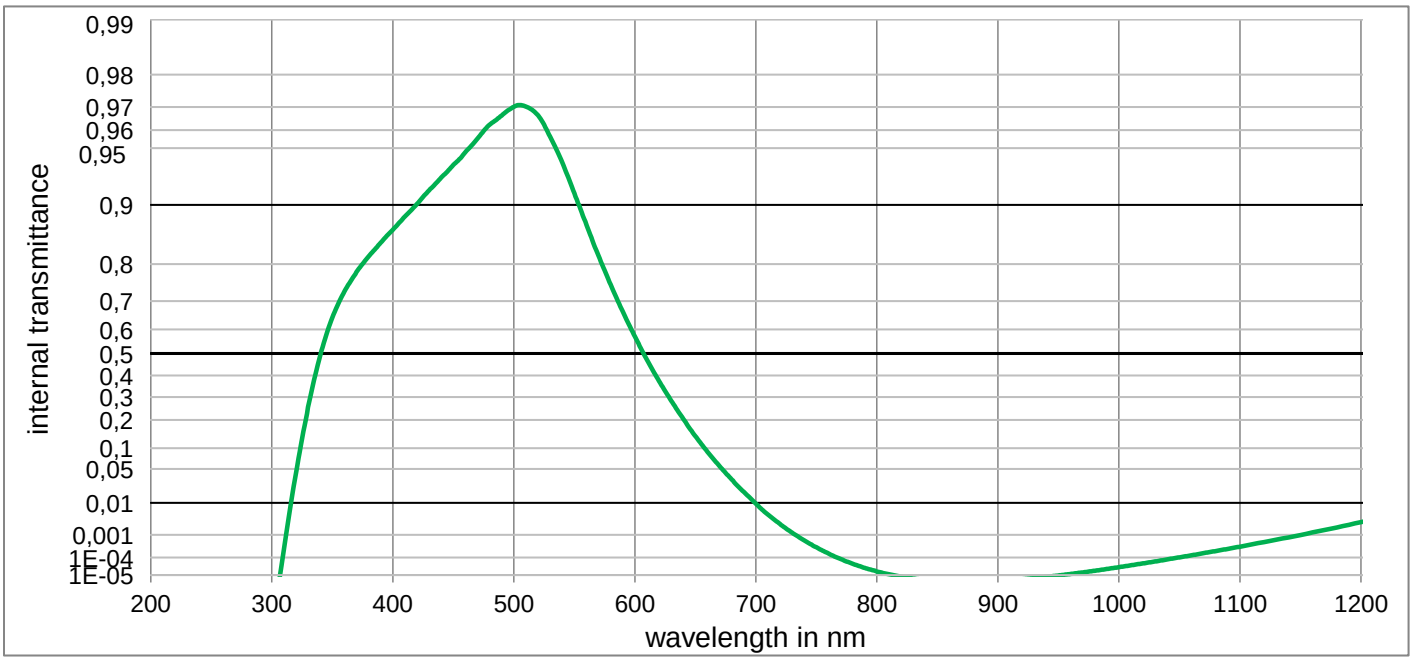
Mechanical properties			
Reference thickness			
	d	=	1,00 mm
Density			
	ρ	=	2,74 g/cm³
Knoop hardness			
	HK[0.1/20]	=	386

Thermal properties			
Transformation temperature			
	Tg	=	322 °C
Thermal expansion in			10^{-6}/K
$\alpha_{(-30°C/+70°C)}$		=	11,6
$\alpha_{(20°C/200°C)}$		=	13,1

Chemical properties			
Chemical resistance			
	FR class	=	0
	SR class	=	5.1
	AR class	=	3
Resistance against humidity			
Delicate glass			
see pocket catalogue "Optical Filter Glass 2024", chapter 5.5			

Colormetric properties				
		1 mm	2 mm	3 mm
Illuminant D65	x	0,257	0,226	0,207
	y	0,326	0,322	0,318
	Y	72,8	62,3	55,1
	λ_d	491 nm	490 nm	490 nm
	P_e	0,207	0,321	0,395
Illuminant A	x	0,365	0,314	0,279
	y	0,434	0,445	0,450
	Y	65,9	53,3	45,2
	λ_d	500 nm	500 nm	499 nm
	P_e	0,188	0,305	0,385

Notes
Ionically colored glass
Bandpass filter / Shortpass filter
NIR cutoff filter
ISO 23364:2021
Disclaimer
All data without tolerances are to be understood to be reference values.



Data Sheet

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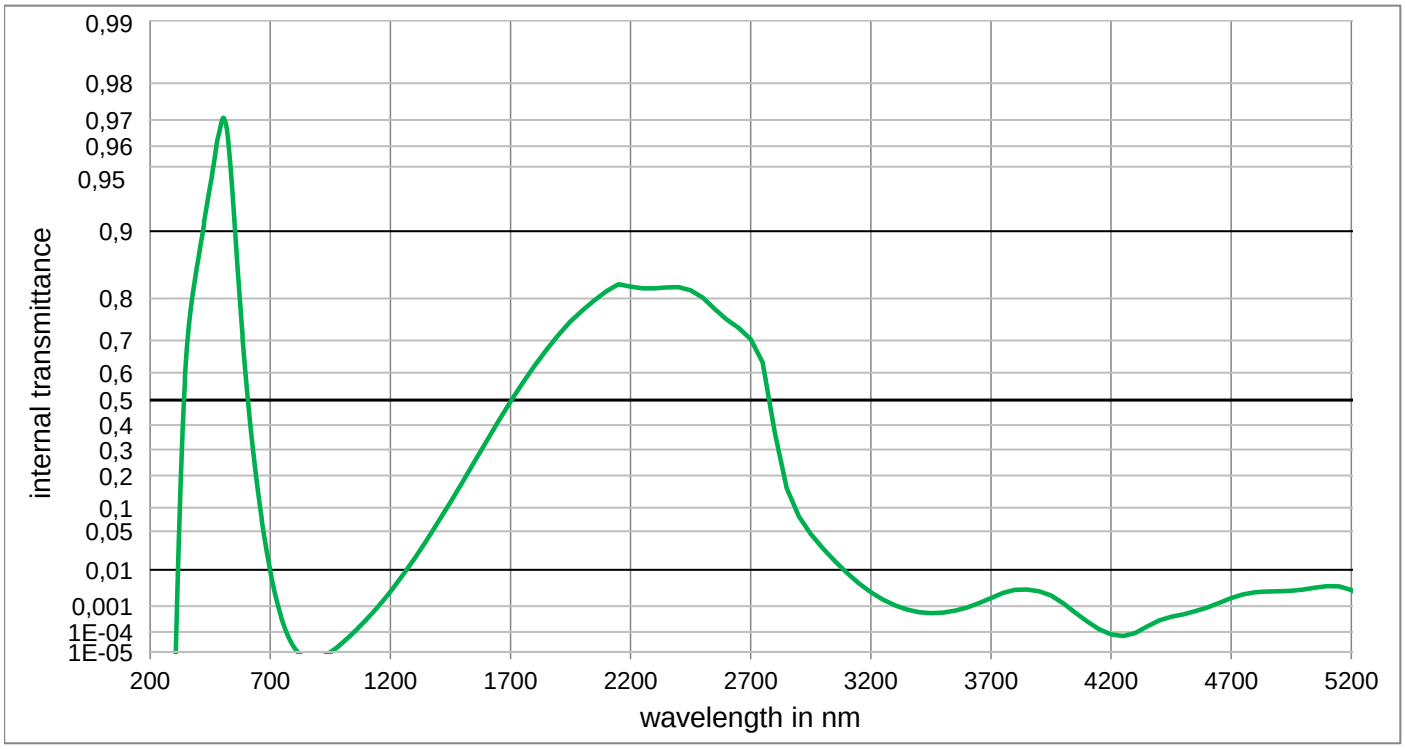

Internal transmittance ti at reference thickness
The internal transmittance values, tabulated and graphically represented, are reference values only

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	< 1,000E-05	500	9,701E-01	800	1,679E-05	1100	3,264E-04	2200	8,223E-01	3700	1,829E-03
210	< 1,000E-05	510	9,702E-01	810	1,129E-05	1110	4,120E-04	2250	8,194E-01	3750	2,580E-03
220	< 1,000E-05	520	9,667E-01	820	< 1,000E-05	1120	5,116E-04	2300	8,195E-01	3800	3,154E-03
230	< 1,000E-05	530	9,566E-01	830	< 1,000E-05	1130	6,423E-04	2350	8,210E-01	3850	3,205E-03
240	< 1,000E-05	540	9,404E-01	840	< 1,000E-05	1140	7,952E-04	2400	8,214E-01	3900	2,858E-03
250	< 1,000E-05	550	9,132E-01	850	< 1,000E-05	1150	9,899E-04	2450	8,158E-01	3950	2,168E-03
260	< 1,000E-05	560	8,728E-01	860	< 1,000E-05	1160	1,222E-03	2500	8,015E-01	4000	1,246E-03
270	< 1,000E-05	570	8,184E-01	870	< 1,000E-05	1170	1,508E-03	2550	7,779E-01	4050	6,041E-04
280	< 1,000E-05	580	7,488E-01	880	< 1,000E-05	1180	1,853E-03	2600	7,542E-01	4100	2,775E-04
290	< 1,000E-05	590	6,653E-01	890	< 1,000E-05	1190	2,274E-03	2650	7,335E-01	4150	1,304E-04
300	< 1,000E-05	600	5,718E-01	900	< 1,000E-05	1200	2,781E-03	2700	7,036E-01	4200	7,747E-05
310	2,473E-04	610	4,724E-01	910	< 1,000E-05	1250	7,276E-03	2750	6,343E-01	4250	6,541E-05
320	4,316E-02	620	3,743E-01	920	< 1,000E-05	1300	1,708E-02	2800	3,706E-01	4300	8,895E-05
330	2,547E-01	630	2,834E-01	930	< 1,000E-05	1350	3,605E-02	2850	1,569E-01	4350	1,733E-04
340	4,905E-01	640	2,037E-01	940	< 1,000E-05	1400	6,784E-02	2900	7,906E-02	4400	3,052E-04
350	6,442E-01	650	1,392E-01	950	< 1,000E-05	1450	1,147E-01	2950	4,535E-02	4450	4,169E-04
360	7,297E-01	660	8,981E-02	960	1,176E-05	1500	1,765E-01	3000	2,671E-02	4500	5,160E-04
370	7,811E-01	670	5,537E-02	970	1,474E-05	1550	2,513E-01	3050	1,536E-02	4550	6,651E-04
380	8,163E-01	680	3,258E-02	980	1,859E-05	1600	3,332E-01	3100	8,588E-03	4600	9,006E-04
390	8,436E-01	690	1,825E-02	990	2,366E-05	1650	4,155E-01	3150	4,772E-03	4650	1,277E-03
400	8,658E-01	700	9,545E-03	1000	3,013E-05	1700	4,949E-01	3200	2,711E-03	4700	1,805E-03
410	8,849E-01	710	4,770E-03	1010	3,852E-05	1750	5,633E-01	3250	1,632E-03	4750	2,353E-03
420	9,011E-01	720	2,404E-03	1020	4,902E-05	1800	6,229E-01	3300	1,062E-03	4800	2,719E-03
430	9,162E-01	730	1,205E-03	1030	6,271E-05	1850	6,739E-01	3350	7,617E-04	4850	2,853E-03
440	9,283E-01	740	6,007E-04	1040	7,974E-05	1900	7,158E-01	3400	6,129E-04	4900	2,887E-03
450	9,384E-01	750	3,062E-04	1050	1,018E-04	1950	7,492E-01	3450	5,650E-04	4950	2,973E-03
460	9,475E-01	760	1,568E-04	1060	1,287E-04	2000	7,754E-01	3500	5,886E-04	5000	3,218E-03
470	9,556E-01	770	8,431E-05	1070	1,640E-04	2050	7,963E-01	3550	6,906E-04	5050	3,616E-03
480	9,626E-01	780	4,649E-05	1080	2,067E-04	2100	8,145E-01	3600	8,896E-04	5100	3,971E-03
490	9,666E-01	790	2,707E-05	1090	2,611E-04	2150	8,268E-01	3650	1,246E-03	5150	3,909E-03