


DATA SHEET

SCHOTT BG50

Optical properties	
Reflection factor	
$P_d = 0,916$	
Spectral values guaranteed	
τ_i (500 nm)	$\geq 0,96$
τ_i (600 nm)	$\geq 0,68$
τ_i (700 nm)	$\leq 0,13$
Refractive indices	
n_e (546 nm)	= 1,54
n_d (587,6 nm)	= 1,53
Sellmeier coefficients	
on request	
Internal quality	
Bubble class	1

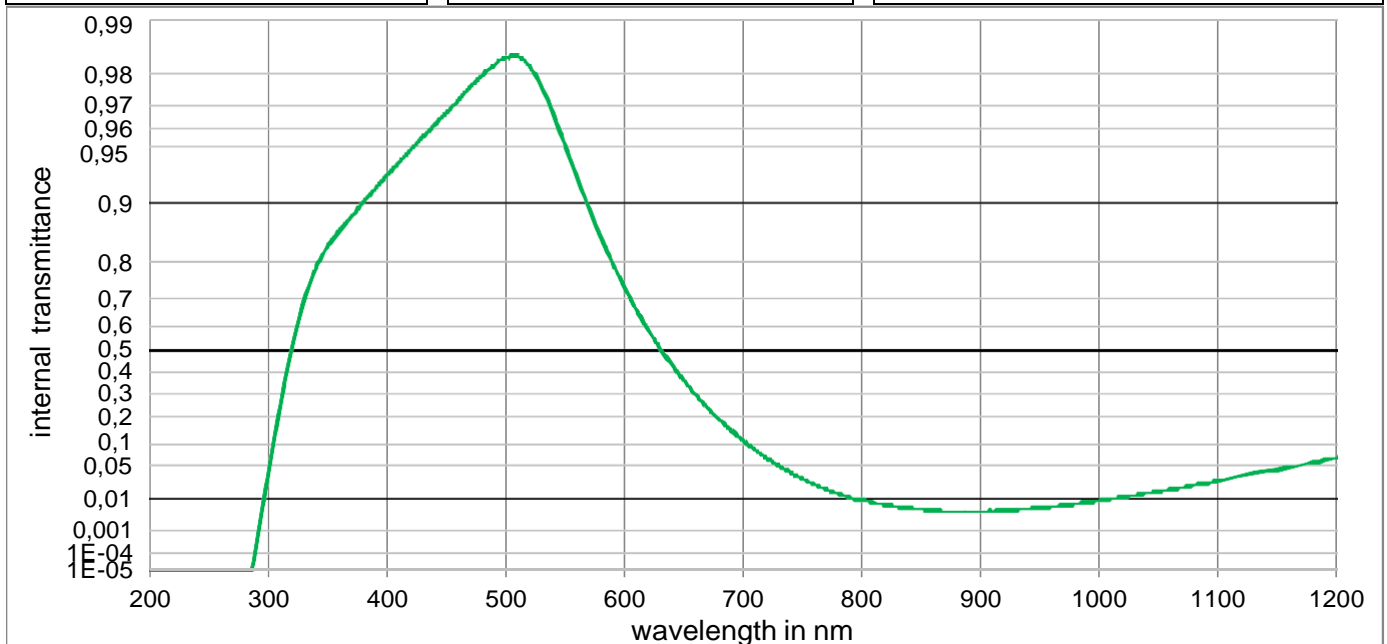
Mechanical properties	
Reference thickness	
$d = 1,00$ mm	
Density	
$\rho = 2,61$ g/cm ³	
Knoop hardness	
HK[0.1/20] = 500	

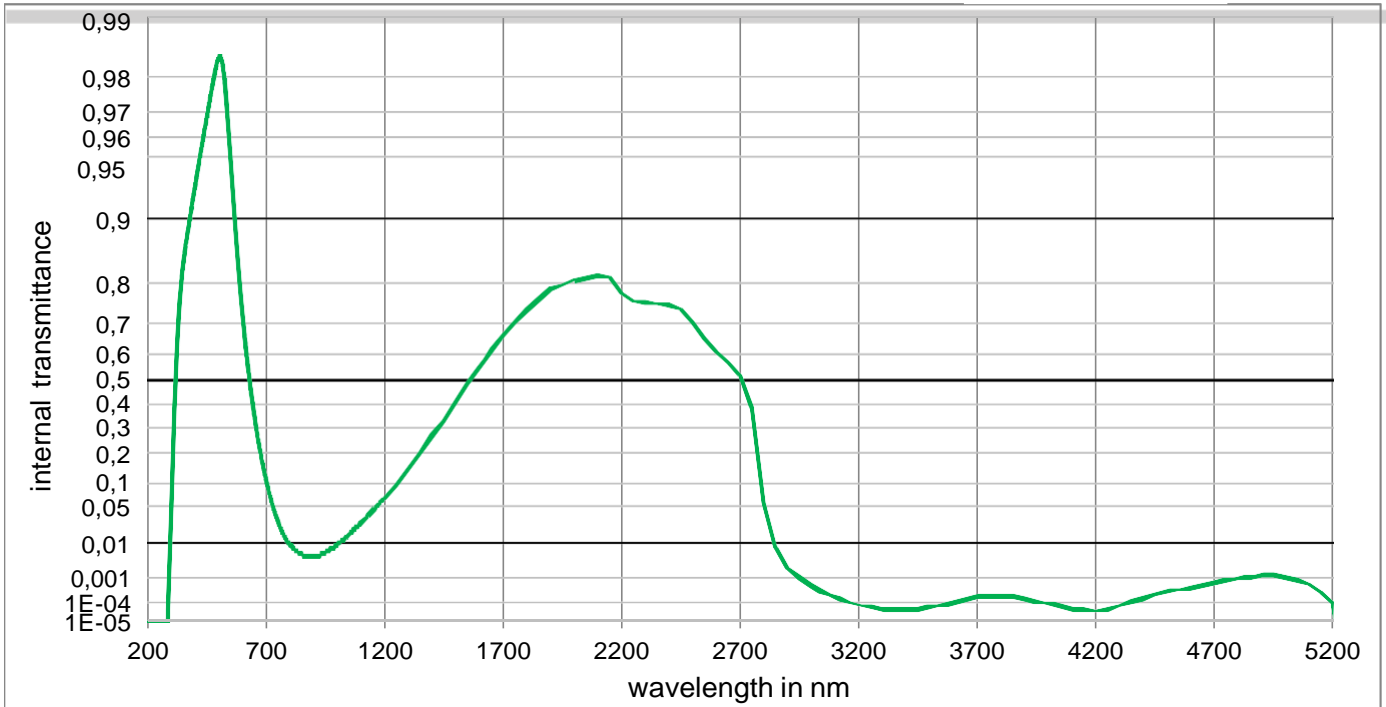
Thermal properties	
Transformation temperature	
$T_g = 452$ °C	
Thermal expansion in 10⁻⁶/K	
α (-30°C/+70°C)	= 7,3
α (20°C/300°C)	= 9,0

Chemical properties	
Chemical resistance	
FR class	= 0
SR class	= 2
AR class	= 2
 <p>Long-term changes in the polished surface are possible under some circumstances.</p>	

Colorimetric properties				
		1 mm	2 mm	3 mm
Illuminant D65	x	0,278	0,254	0,236
	y	0,328	0,325	0,323
	Y	80,1	72,1	66,1
	λ_d	491 nm	491 nm	491 nm
	P_e	0,128	0,218	0,286
Illuminant A	x	0,398	0,360	0,331
	y	0,424	0,435	0,441
	Y	75,3	64,9	57,5
	λ_d	501 nm	500 nm	500 nm
	P_e	0,112	0,198	0,267

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 τ_i 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	9,839E-01	800	1,037E-02	1100	2,742E-02	2200	7,812E-01	3700	1,973E-04
210	< 1,0E-05	510	9,842E-01	810	8,778E-03	1110	3,025E-02	2250	7,616E-01	3750	2,116E-04
220	< 1,0E-05	520	9,822E-01	820	7,608E-03	1120	3,332E-02	2300	7,572E-01	3800	2,120E-04
230	< 1,0E-05	530	9,772E-01	830	6,752E-03	1130	3,694E-02	2350	7,563E-01	3850	2,052E-04
240	< 1,0E-05	540	9,674E-01	840	6,125E-03	1140	4,032E-02	2400	7,542E-01	3900	1,659E-04
250	< 1,0E-05	550	9,522E-01	850	5,688E-03	1150	4,421E-02	2450	7,434E-01	3950	1,296E-04
260	< 1,0E-05	560	9,289E-01	860	5,197E-03	1160	4,843E-02	2500	7,084E-01	4000	1,011E-04
270	< 1,0E-05	570	8,966E-01	870	4,946E-03	1170	5,312E-02	2550	6,584E-01	4050	7,680E-05
280	< 1,0E-05	580	8,539E-01	880	4,823E-03	1180	5,828E-02	2600	6,109E-01	4100	6,008E-05
290	2,6E-04	590	8,011E-01	890	4,901E-03	1190	6,325E-02	2650	5,749E-01	4150	4,951E-05
300	3,5E-02	600	7,390E-01	900	4,915E-03	1200	6,887E-02	2700	5,269E-01	4200	4,519E-05
310	2,4E-01	610	6,688E-01	910	4,987E-03	1250	1,003E-01	2750	3,913E-01	4250	5,260E-05
320	5,136E-01	620	5,939E-01	920	5,229E-03	1300	1,453E-01	2800	6,071E-02	4300	7,854E-05
330	6,928E-01	630	5,169E-01	930	5,480E-03	1350	2,027E-01	2850	8,223E-03	4350	1,220E-04
340	7,857E-01	640	4,412E-01	940	5,861E-03	1400	2,710E-01	2900	2,336E-03	4400	1,756E-04
350	8,340E-01	650	3,695E-01	950	6,242E-03	1450	3,377E-01	2950	1,128E-03	4450	2,437E-04
360	8,633E-01	660	3,035E-01	960	6,813E-03	1500	4,130E-01	3000	5,772E-04	4500	3,176E-04
370	8,842E-01	670	2,449E-01	970	7,328E-03	1550	4,865E-01	3050	3,274E-04	4550	3,950E-04
380	9,022E-01	680	1,942E-01	980	7,995E-03	1600	5,544E-01	3100	2,007E-04	4600	4,885E-04
390	9,167E-01	690	1,517E-01	990	8,860E-03	1650	6,147E-01	3150	1,291E-04	4650	5,950E-04
400	9,293E-01	700	1,170E-01	1000	9,751E-03	1700	6,652E-01	3200	8,906E-05	4700	7,243E-04
410	9,397E-01	710	8,944E-02	1010	1,078E-02	1750	7,067E-01	3250	6,669E-05	4750	8,725E-04
420	9,487E-01	720	6,797E-02	1020	1,200E-02	1800	7,389E-01	3300	5,495E-05	4800	1,049E-03
430	9,559E-01	730	5,156E-02	1030	1,325E-02	1850	7,665E-01	3350	5,023E-05	4850	1,222E-03
440	9,624E-01	740	3,924E-02	1040	1,476E-02	1900	7,902E-01	3400	5,039E-05	4900	1,350E-03
450	9,676E-01	750	3,004E-02	1050	1,637E-02	1950	7,990E-01	3450	5,582E-05	4950	1,362E-03
460	9,724E-01	760	2,323E-02	1060	1,823E-02	2000	8,086E-01	3500	6,718E-05	5000	1,229E-03
470	9,765E-01	770	1,820E-02	1070	2,014E-02	2050	8,135E-01	3550	8,770E-05	5050	9,773E-04
480	9,798E-01	780	1,449E-02	1080	2,240E-02	2100	8,176E-01	3600	1,188E-04	5100	6,281E-04
490	9,822E-01	790	1,176E-02	1090	2,484E-02	2150	8,145E-01	3650	1,588E-04	5150	3,065E-04

Status 19.09.2018