DATA SHEET

SCHOTT BG63

Optical properties

Reflection factor		
P_d	=	0,915
Spectral values guaranteed		
τ_i (405 nm)	≥	0,95
τ_i (514 nm)	≥	0,96
τ_i (633 nm)	≥	0,5
τ_i (694 nm)	≤	0,25
τ_i (1060 nm)	≤	0,16

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 365 nm to 2325 nm

B_1	1,3115
B_2	0,0046
B_3	0,3087
C_1	8,469E-03 µm²
C_2	5,7634E-02 µm²
C_3	46,721 µm²

Internal quality

Bubble class 2

Mechanical properties

Reference thickness

d = 1,00 mm

Density

ρ = 2,79 g/cm³

Knoop hardness

HK[0.1/20] = 362

Thermal properties

Transformation temperature

Tg = 416 °C

Thermal expansion in 10^{-6}/K

$\alpha_{(-30°C/+70°C)}$	=	11,9
$\alpha_{(20°C/300°C)}$	=	13,9

Chemical properties

Chemical resistance

FR class = 1
SR class = 52.3
AR class = 3.3

Long-term changes in the polished surface are possible under some circumstances.

Colormetric properties

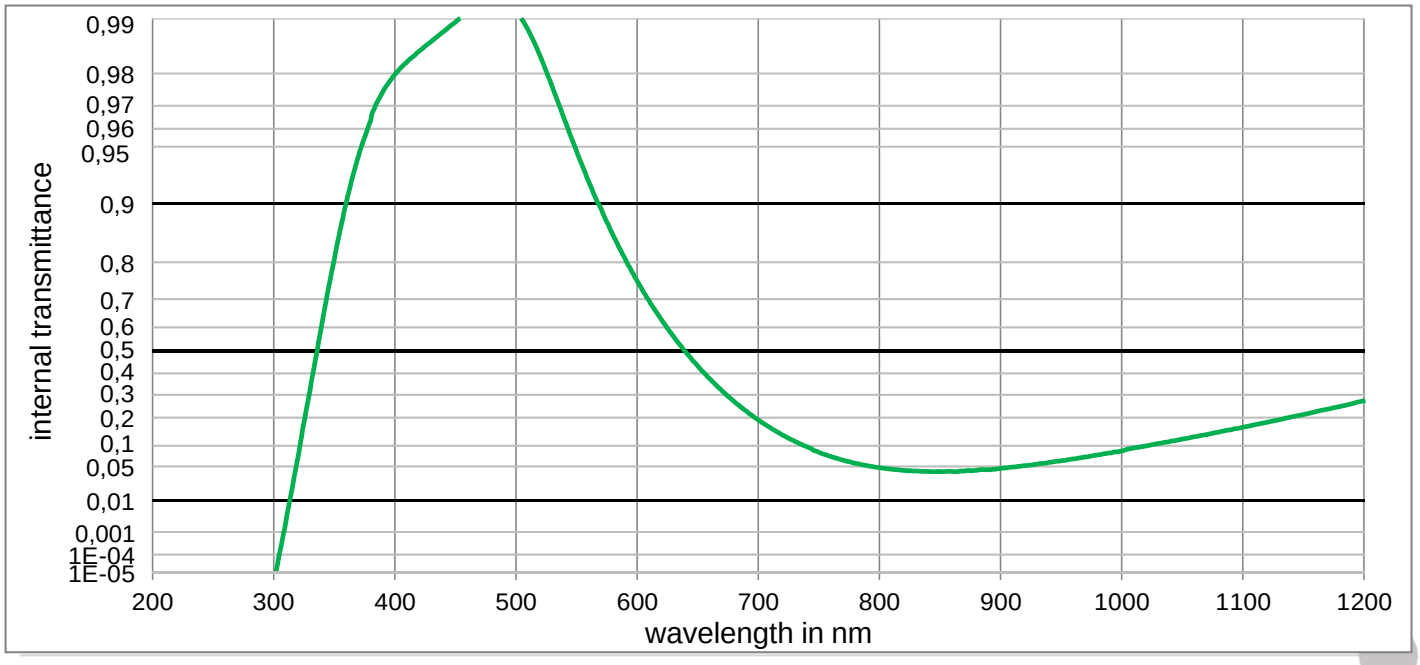
		1 mm	2 mm	3 mm
Illuminant D65	x	0,280	0,255	0,237
	y	0,325	0,319	0,313
	Y	80,9	73,0	67,0
	λ_d	490 nm	489 nm	489 nm
	P_e	0,123	0,216	0,289
Illuminant A	x	0,403	0,366	0,336
	y	0,420	0,428	0,432
	Y	76,5	66,2	58,6
	λ_d	500 nm	499 nm	499 nm
	P_e	0,102	0,186	0,256

Notes

Ionically colored glass
Bandpass filter / Shortpass filter
NIR cutoff filter
lambda_50%(d=1.5mm) = 614 nm
DIN 58131

Disclaimer

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



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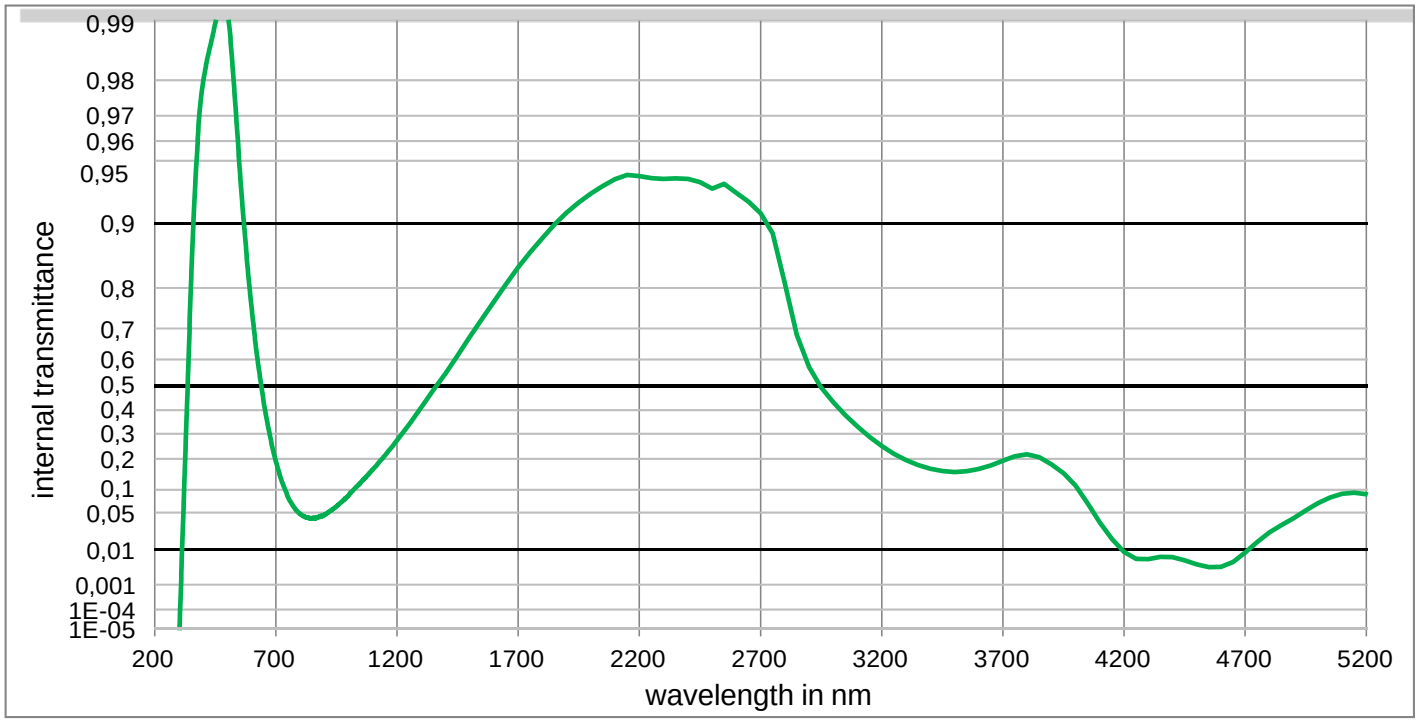

Internal transmittance ti at reference thickness
The internal transmittance values, tabulated and graphically represented, are reference values only

λ /nm	τi	λ /nm	τi	λ /nm	τi	λ /nm	τi	λ /nm	τi	λ /nm	τi
200	< 1,0E-05	500	9,909E-01	800	4,771E-02	1100	1,621E-01	2200	9,406E-01	3700	1,921E-01
210	< 1,0E-05	510	9,885E-01	810	4,471E-02	1110	1,714E-01	2250	9,393E-01	3750	2,095E-01
220	< 1,0E-05	520	9,839E-01	820	4,271E-02	1120	1,806E-01	2300	9,388E-01	3800	2,171E-01
230	< 1,0E-05	530	9,763E-01	830	4,174E-02	1130	1,912E-01	2350	9,391E-01	3850	2,055E-01
240	< 1,0E-05	540	9,644E-01	840	4,061E-02	1140	2,015E-01	2400	9,387E-01	3900	1,796E-01
250	< 1,0E-05	550	9,471E-01	850	4,057E-02	1150	2,122E-01	2450	9,364E-01	3950	1,492E-01
260	< 1,0E-05	560	9,232E-01	860	4,065E-02	1160	2,240E-01	2500	9,317E-01	4000	1,114E-01
270	< 1,0E-05	570	8,935E-01	870	4,149E-02	1170	2,349E-01	2550	9,352E-01	4050	6,722E-02
280	< 1,0E-05	580	8,543E-01	880	4,238E-02	1180	2,467E-01	2600	9,284E-01	4100	3,475E-02
290	< 1,0E-05	590	8,076E-01	890	4,391E-02	1190	2,591E-01	2650	9,210E-01	4150	1,686E-02
300	< 1,0E-05	600	7,536E-01	900	4,619E-02	1200	2,726E-01	2700	9,101E-01	4200	8,809E-03
310	2,4E-03	610	6,937E-01	910	4,868E-02	1250	3,398E-01	2750	8,881E-01	4250	5,895E-03
320	7,008E-02	620	6,295E-01	920	5,153E-02	1300	4,115E-01	2800	8,095E-01	4300	5,826E-03
330	3,265E-01	630	5,632E-01	930	5,418E-02	1350	4,843E-01	2850	6,807E-01	4350	6,643E-03
340	6,188E-01	640	4,980E-01	940	5,756E-02	1400	5,477E-01	2900	5,725E-01	4400	6,550E-03
350	8,085E-01	650	4,343E-01	950	6,141E-02	1450	6,145E-01	2950	4,941E-01	4450	5,416E-03
360	9,020E-01	660	3,734E-01	960	6,548E-02	1500	6,746E-01	3000	4,325E-01	4500	4,256E-03
370	9,441E-01	670	3,185E-01	970	6,997E-02	1550	7,266E-01	3050	3,786E-01	4550	3,563E-03
380	9,639E-01	680	2,695E-01	980	7,511E-02	1600	7,697E-01	3100	3,298E-01	4600	3,622E-03
390	9,748E-01	690	2,267E-01	990	7,958E-02	1650	8,079E-01	3150	2,863E-01	4650	4,923E-03
400	9,797E-01	700	1,900E-01	1000	8,513E-02	1700	8,387E-01	3200	2,493E-01	4700	8,493E-03
410	9,827E-01	710	1,594E-01	1010	9,301E-02	1750	8,629E-01	3250	2,191E-01	4750	1,485E-02
420	9,849E-01	720	1,340E-01	1020	9,917E-02	1800	8,822E-01	3300	1,952E-01	4800	2,293E-02
430	9,867E-01	730	1,133E-01	1030	1,063E-01	1850	8,987E-01	3350	1,771E-01	4850	3,124E-02
440	9,882E-01	740	9,696E-02	1040	1,124E-01	1900	9,108E-01	3400	1,640E-01	4900	4,079E-02
450	9,896E-01	750	8,151E-02	1050	1,202E-01	1950	9,204E-01	3450	1,564E-01	4950	5,353E-02
460	9,907E-01	760	7,097E-02	1060	1,282E-01	2000	9,277E-01	3500	1,535E-01	5000	6,786E-02
470	9,915E-01	770	6,270E-02	1070	1,348E-01	2050	9,336E-01	3550	1,559E-01	5050	8,079E-02
480	9,919E-01	780	5,639E-02	1080	1,437E-01	2100	9,385E-01	3600	1,629E-01	5100	8,941E-02
490	9,919E-01	790	5,125E-02	1090	1,522E-01	2150	9,414E-01	3650	1,752E-01	5150	9,218E-02

Status 19.09.2018