

# DATA SHEET

# SCHOTT BG3

## BG3

Reflection factor	
$P_d$	0.921

Reference thickness	
d [mm]	1

### Spectral values guaranteed

$\tau_i$ (365nm)	$\geq$	0.94
$\tau_i$ (633nm)	$\leq$	0.00005

### Refractive index n

n (302.1 nm) = 1.548
$n_g$ (435.8 nm) = 1.520
$n_F$ (480.0 nm) = 1.516
$n_F$ (486.1 nm) = 1.516
Sellmeier coefficients on request

Density	
$\rho$ [g/cm <sup>3</sup> ]	2.56

Bubble content	
Bubble class	1

Chemical Resistance	
FR class	0
SR class	1.0
AR class	1.0

Transformation temperature	
T <sub>g</sub> [°C]	478

Thermal expansion	
$\alpha_{-30/+70^\circ\text{C}}$ [10 <sup>-6</sup> /K]	8.8
$\alpha_{20/300^\circ\text{C}}$ [10 <sup>-6</sup> /K]	10.2
$\alpha_{20/200^\circ\text{C}}$ [10 <sup>-6</sup> /K]	

### Temperature coefficient

T <sub>k</sub> [nm/°C]	

### Notes

Ionically colored glass
Bandpass filter

Transmission changes are possible under the action of intense ultraviolet radiation.

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

Guaranteed values are only those values listed in the section

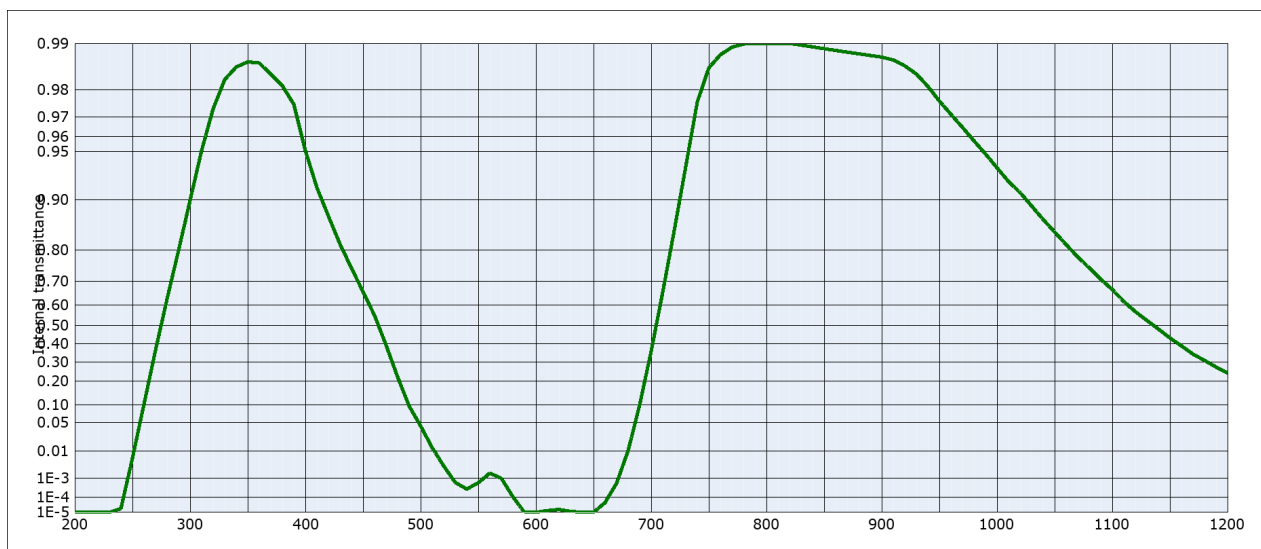
"Spectral values guaranteed".

### Colorimetric evaluation

Illuminant	A (Planck T = 2856 K)		
	1	2	3
d [mm]			
x	0.160	0.166	0.170
y	0.042	0.024	0.020
Y	1	0	0
$\lambda_d$ [nm]	458	447	440
$P_e$	0.96	0.98	0.98

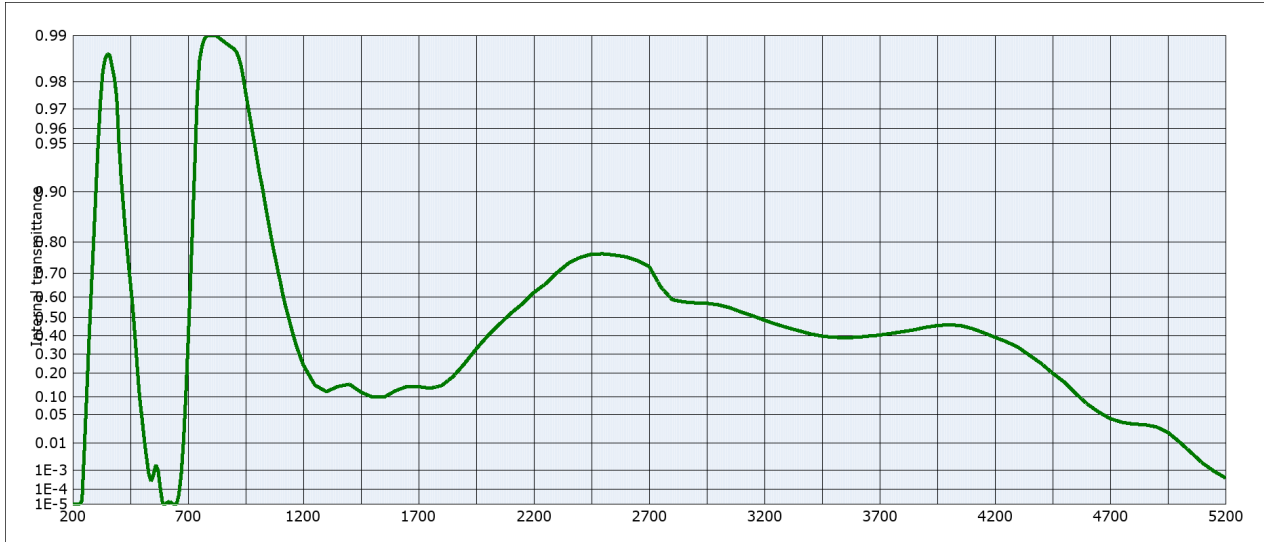
Illuminant	Planck T = 3200 K		
	1	2	3
d [mm]			
x	0.157	0.163	0.167
y	0.038	0.022	0.018
Y	1	0	0
$\lambda_d$ [nm]	457	447	442
$P_e$	0.97	0.98	0.99

Illuminant	D65 (T <sub>C</sub> = 6504 K)		
	1	2	3
d [mm]			
x	0.154	0.160	0.163
y	0.029	0.018	0.014
Y	2	1	0
$\lambda_d$ [nm]	455	448	444
$P_e$	0.98	0.99	1.00



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**Internal transmittance  $\tau_i$  at reference thickness  $d = 1$  mm**  
The internal transmittance values, tabulated and graphically represented, are reference values only

$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$
200	$< 10^{-5}$	500	$4.3 \cdot 10^{-2}$	800	0.990	1100	0.667	2200	0.620	3700	0.404
210	$< 10^{-5}$	510	$1.3 \cdot 10^{-2}$	810	0.990	1110	0.615	2250	0.657	3750	0.413
220	$< 10^{-5}$	520	$3.2 \cdot 10^{-3}$	820	0.990	1120	0.568	2300	0.701	3800	0.423
230	$< 10^{-5}$	530	$6.4 \cdot 10^{-4}$	830	0.990	1130	0.525	2350	0.735	3850	0.433
240	$1.9 \cdot 10^{-5}$	540	$3.0 \cdot 10^{-4}$	840	0.989	1140	0.480	2400	0.754	3900	0.446
250	$6.1 \cdot 10^{-3}$	550	$6.2 \cdot 10^{-4}$	850	0.989	1150	0.432	2450	0.764	3950	0.456
260	0.103	560	$1.7 \cdot 10^{-3}$	860	0.989	1160	0.388	2500	0.765	4000	0.460
270	0.364	570	$1.0 \cdot 10^{-3}$	870	0.989	1170	0.343	2550	0.761	4050	0.456
280	0.626	580	$1.1 \cdot 10^{-4}$	880	0.988	1180	0.308	2600	0.756	4100	0.440
290	0.798	590	$< 10^{-5}$	890	0.988	1190	0.273	2650	0.743	4150	0.417
300	0.899	600	$< 10^{-5}$	900	0.988	1200	0.241	2700	0.724	4200	0.392
310	0.951	610	$1.3 \cdot 10^{-5}$	910	0.987	1250	0.146	2750	0.644	4250	0.367
320	0.973	620	$1.6 \cdot 10^{-5}$	920	0.986	1300	0.120	2800	0.587	4300	0.337
330	0.983	630	$1.2 \cdot 10^{-5}$	930	0.984	1350	0.141	2850	0.576	4350	0.293
340	0.986	640	$< 10^{-5}$	940	0.981	1400	0.150	2900	0.572	4400	0.250
350	0.987	650	$< 10^{-5}$	950	0.976	1450	0.118	2950	0.570	4450	0.200
360	0.987	660	$4.7 \cdot 10^{-5}$	960	0.971	1500	0.100	3000	0.562	4500	0.160
370	0.984	670	$5.9 \cdot 10^{-4}$	970	0.965	1550	0.100	3050	0.548	4550	0.113
380	0.981	680	$1.0 \cdot 10^{-2}$	980	0.957	1600	0.124	3100	0.526	4600	$7.8 \cdot 10^{-2}$
390	0.975	690	0.100	990	0.948	1650	0.141	3150	0.507	4650	$5.6 \cdot 10^{-2}$
400	0.951	700	0.359	1000	0.937	1700	0.140	3200	0.484	4700	$4.2 \cdot 10^{-2}$
410	0.916	710	0.655	1010	0.923	1750	0.133	3250	0.463	4750	$3.5 \cdot 10^{-2}$
420	0.874	720	0.846	1020	0.910	1800	0.144	3300	0.444	4800	$3.2 \cdot 10^{-2}$
430	0.815	730	0.938	1030	0.891	1850	0.185	3350	0.427	4850	$3.1 \cdot 10^{-2}$
440	0.745	740	0.976	1040	0.868	1900	0.250	3400	0.410	4900	$2.7 \cdot 10^{-2}$
450	0.658	750	0.986	1050	0.843	1950	0.328	3450	0.398	4950	$2.0 \cdot 10^{-2}$
460	0.550	760	0.988	1060	0.813	2000	0.400	3500	0.392	5000	$1.1 \cdot 10^{-2}$
470	0.393	770	0.989	1070	0.780	2050	0.462	3550	0.390	5050	$5.1 \cdot 10^{-3}$
480	0.222	780	0.990	1080	0.746	2100	0.520	3600	0.392	5100	$2.0 \cdot 10^{-3}$
490	$9.7 \cdot 10^{-2}$	790	0.990	1090	0.706	2150	0.567	3650	0.398	5150	$9.1 \cdot 10^{-4}$