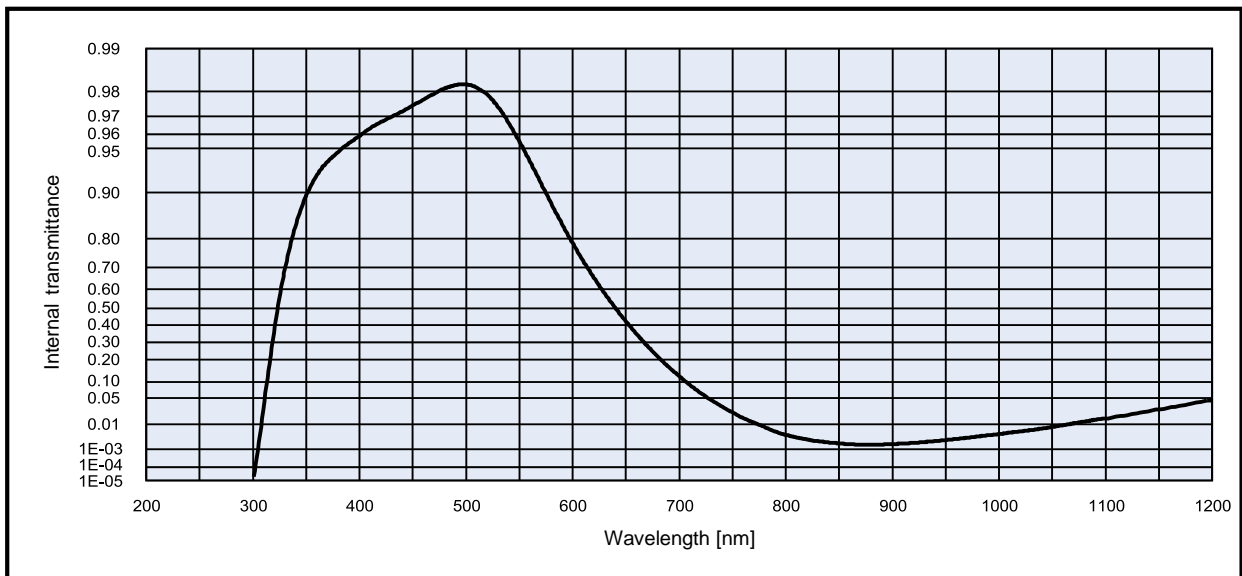


**DATA SHEET**
**SCHOTT BG40**

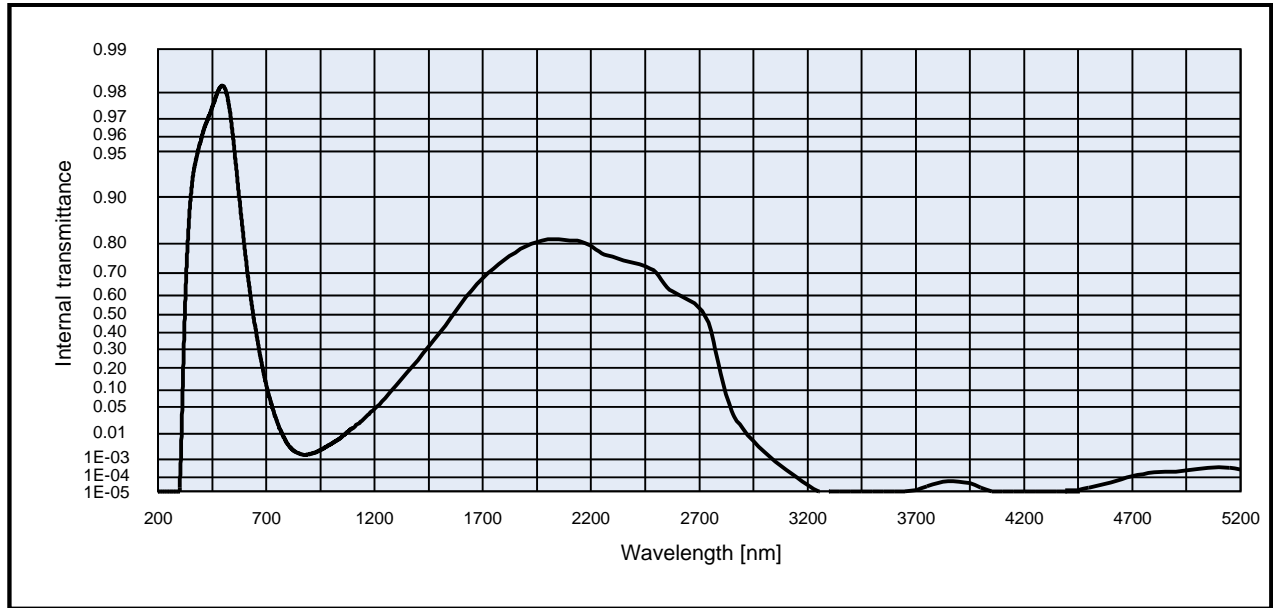
<b>BG40</b>			<b>Density</b>		<b>Notes</b>	
			$\rho$ [g/cm <sup>3</sup> ]	2.74		
<b>Reflection factor</b>			<b>Bubble content</b>		Ionically colored glass	
$P_d$	0.92		Bubble class	2		Band pass filter / short pass filter
<b>Reference thickness</b>			<b>Chemical resistance</b>			
d [mm]	1		FR class	0		
<b>Spectral values guaranteed</b>			SR class	5.1		[!]
$\tau_i$ (350 nm)	$\geq$	0.80	AR class	3.0		Long-term changes in the polished surface are possible under some circumstances
$\tau_i$ (405 nm)	$\geq$	0.93	<b>Transformation temperature</b>			
$\tau_i$ (514 nm)	$\geq$	0.97	$T_g$ [°C]	313		
$\tau_i$ (633 nm)	$\leq$	0.57	<b>Thermal expansion</b>			
$\tau_i$ (694 nm)	$\leq$	0.16	$\alpha_{-30/+70^\circ\text{C}}$ [10 <sup>-6</sup> /K]	11.9		
$\tau_i$ (1060 nm)	$\leq$	0.02	$\alpha_{20/300^\circ\text{C}}$ [10 <sup>-6</sup> /K]			
			$\alpha_{20/200^\circ\text{C}}$ [10 <sup>-6</sup> /K]	13.7		
			<b>Temperature coefficient</b>			
<b>Refractive index n</b>			$T_k$ [nm/°C]			
$\lambda$ [nm]	Element	n				
404.7	Hg	1.54			<b>All data without tolerances are to be understood to be reference values.</b>	
587.6	He	1.53			<b>Guaranteed values are only those values listed in the section "Spectral values guaranteed".</b>	

Colorimetric evaluation											
Illuminant	A ( Planck T = 2856 K )			Illuminant	Planck T = 3200 K			Illuminant	D65 ( T <sub>c</sub> = 6504 K )		
d [mm]	1	2	3	d [mm]	1	2	3	d [mm]	1	2	3
x	0.406	0.374	0.348	x	0.383	0.352	0.327	x	0.283	0.262	0.246
y	0.421	0.430	0.436	y	0.409	0.415	0.419	y	0.327	0.324	0.321
Y	78	68	61	Y	79	70	63	Y	82	75	69
$\lambda_d$ [nm]	501	500	500	$\lambda_d$ [nm]	499	498	498	$\lambda_d$ [nm]	491	490	490
P <sub>e</sub>	0.09	0.17	0.23	P <sub>e</sub>	0.10	0.17	0.23	P <sub>e</sub>	0.11	0.19	0.25



# DATA SHEET

# SCHOTT BG40



Internal transmittance $\tau_i$ at reference thickness $d$ [mm] = 1											
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	< 1.0E-05	500	9.8E-01	800	4.3E-03	1100	1.5E-02	2200	7.9E-01	3700	1.2E-05
210	< 1.0E-05	510	9.8E-01	810	3.4E-03	1110	1.7E-02	2250	7.7E-01	3750	2.5E-05
220	< 1.0E-05	520	9.8E-01	820	2.8E-03	1120	1.9E-02	2300	7.6E-01	3800	4.2E-05
230	< 1.0E-05	530	9.7E-01	830	2.3E-03	1130	2.1E-02	2350	7.5E-01	3850	5.4E-05
240	< 1.0E-05	540	9.7E-01	840	2.1E-03	1140	2.4E-02	2400	7.4E-01	3900	5.3E-05
250	< 1.0E-05	550	9.6E-01	850	1.9E-03	1150	2.7E-02	2450	7.3E-01	3950	4.3E-05
260	< 1.0E-05	560	9.4E-01	860	1.7E-03	1160	3.1E-02	2500	7.0E-01	4000	2.0E-05
270	< 1.0E-05	570	9.2E-01	870	1.6E-03	1170	3.3E-02	2550	6.4E-01	4050	< 1.0E-05
280	< 1.0E-05	580	8.8E-01	880	1.6E-03	1180	3.7E-02	2600	6.1E-01	4100	< 1.0E-05
290	< 1.0E-05	590	8.4E-01	890	1.7E-03	1190	4.1E-02	2650	5.8E-01	4150	< 1.0E-05
300	< 1.0E-05	600	7.9E-01	900	1.8E-03	1200	4.6E-02	2700	5.4E-01	4200	< 1.0E-05
310	2.6E-02	610	7.3E-01	910	1.8E-03	1250	7.5E-02	2750	4.4E-01	4250	< 1.0E-05
320	3.6E-01	620	6.6E-01	920	2.0E-03	1300	1.2E-01	2800	1.7E-01	4300	< 1.0E-05
330	6.9E-01	630	5.8E-01	930	2.1E-03	1350	1.8E-01	2850	4.2E-02	4350	< 1.0E-05
340	8.3E-01	640	5.0E-01	940	2.4E-03	1400	2.4E-01	2900	1.5E-02	4400	< 1.0E-05
350	8.9E-01	650	4.2E-01	950	2.6E-03	1450	3.2E-01	2950	5.8E-03	4450	1.3E-05
360	9.2E-01	660	3.5E-01	960	2.9E-03	1500	4.0E-01	3000	2.2E-03	4500	2.0E-05
370	9.4E-01	670	2.8E-01	970	3.2E-03	1550	4.8E-01	3050	8.1E-04	4550	3.0E-05
380	9.5E-01	680	2.2E-01	980	3.6E-03	1600	5.6E-01	3100	2.8E-04	4600	4.6E-05
390	9.5E-01	690	1.7E-01	990	4.1E-03	1650	6.3E-01	3150	9.8E-05	4650	7.4E-05
400	9.6E-01	700	1.2E-01	1000	4.5E-03	1700	6.8E-01	3200	3.0E-05	4700	1.2E-04
410	9.6E-01	710	8.9E-02	1010	5.1E-03	1750	7.2E-01	3250	1.0E-05	4750	1.6E-04
420	9.7E-01	720	6.4E-02	1020	5.7E-03	1800	7.5E-01	3300	< 1.0E-05	4800	2.0E-04
430	9.7E-01	730	4.6E-02	1030	6.4E-03	1850	7.7E-01	3350	< 1.0E-05	4850	2.3E-04
440	9.7E-01	740	3.2E-02	1040	7.1E-03	1900	7.9E-01	3400	< 1.0E-05	4900	2.3E-04
450	9.7E-01	750	2.3E-02	1050	8.2E-03	1950	8.0E-01	3450	< 1.0E-05	4950	2.6E-04
460	9.8E-01	760	1.6E-02	1060	9.4E-03	2000	8.1E-01	3500	< 1.0E-05	5000	3.1E-04
470	9.8E-01	770	1.1E-02	1070	1.1E-02	2050	8.1E-01	3550	< 1.0E-05	5050	3.8E-04
480	9.8E-01	780	8.3E-03	1080	1.2E-02	2100	8.1E-01	3600	< 1.0E-05	5100	4.0E-04
490	9.8E-01	790	5.7E-03	1090	1.4E-02	2150	8.1E-01	3650	< 1.0E-05	5150	3.8E-04