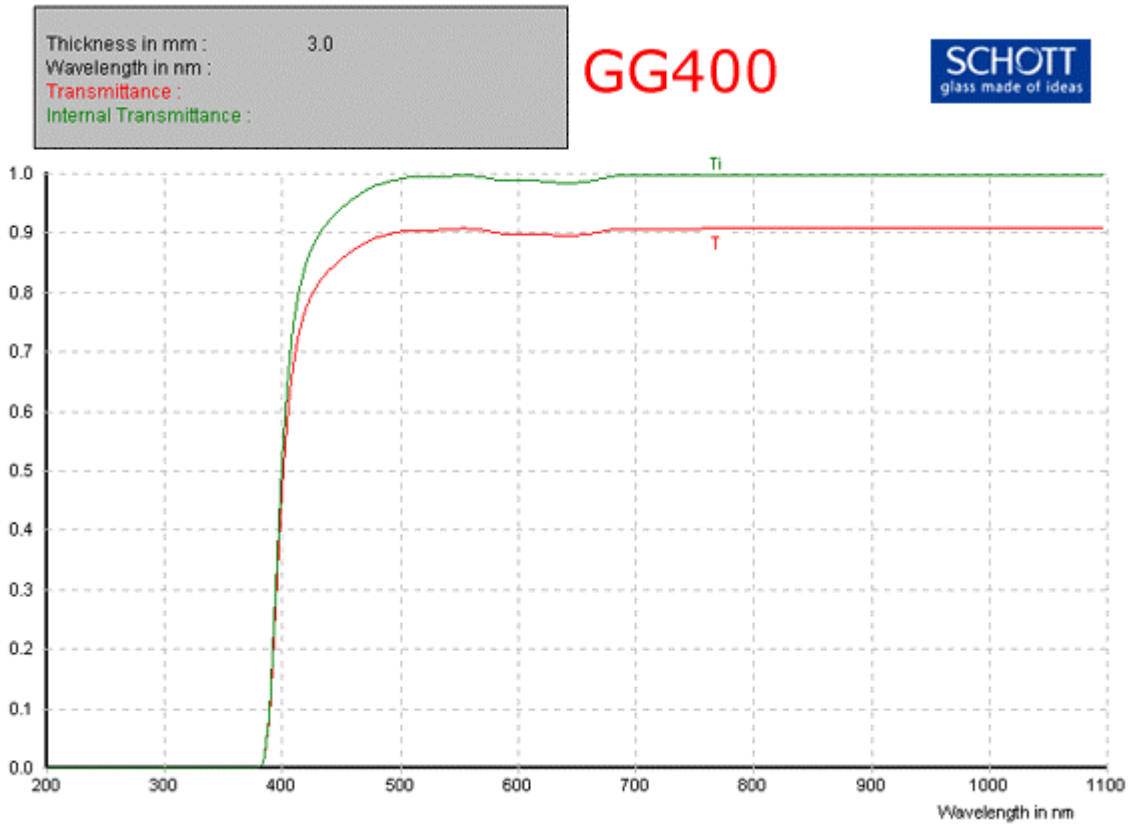
DATA SHEET **SCHOTT GG400**



GG400

Reflection factor	
P_d	0.91
Bubble content	
Bubble class	3
Chemical resistance	
FR class	3
SR class	4.4
AR class	1.0

Density		
ρ [g/cm³]	2.75	
Transformation temperature		
Tg [°C]	595	
Thermal expansion		
$\alpha_{-30/+70°C}$ [10^{-6}/K]	9.6	Per DIN 58191 LP 400
$\alpha_{20/300°C}$ [10^{-6}/K]	10.5	Per DIN 58191
Temperature coefficient		
T_k [nm/°C]	0.07	Colloidally colored glass

Tolerances for long pass filters
for thickness d = 3 mm

λ_C (τ_i = 0,5 mm) [nm]	400±6
λ_S (τ_{iS} = $1 \cdot 10^{-5}$) [nm]	370
λ_{p1} (τ_{ip1} = 0.95)[nm]	475
λ_{p2} (τ_{ip2} = 0.99)[nm]	700

Refractive index n

λ [nm]	Element	n
435.8	Hg	1.56
587.6	He	1.54
1014	Hg	1.53

Tristimulus values

	d [mm]	x	y	Y	λ_d [nm]	P_e
A	1	0.448	0.409	91	578	0.01
2856	2	0.449	0.410	91	578	0.03
K	3	0.450	0.411	90	578	0.04
	5	0.451	0.413	90	578	0.06
	1	0.424	0.401	91	576	0.01
3200	2	0.425	0.402	91	576	0.03
K	3	0.426	0.404	90	576	0.04
	5	0.428	0.406	90	576	0.06
	1	0.314	0.332	91	567	0.01
D_{65}	2	0.315	0.335	91	567	0.02
	3	0.317	0.337	90	567	0.03
	5	0.319	0.343	90	567	0.06

Application notes
Long pass filter
- see section 6.7.1

Status June 1997

Transmittance τ and internal transmittance τ_i at d = 3 mm

λ [nm]	τ	τ_i	λ [nm]	τ	τ_i
200	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	700	0.91	1.00
210	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	710	0.91	1.00
220	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	720	0.91	1.00
230	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	730	0.91	1.00
240	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	740	0.91	1.00
250	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	750	0.91	1.00
260	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	760	0.91	1.00
270	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	770	0.91	1.00
280	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	780	0.91	1.00
290	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	790	0.91	1.00
300	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	800	0.91	1.00
310	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	850	0.91	1.00
320	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	900	0.91	1.00
330	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	950	0.91	1.00
340	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	1000	0.91	1.00
350	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	1060	0.91	1.00
360	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	1100	0.91	1.00
370	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	1200	0.91	1.00
380	$<1 \cdot 10^{-5}$	$1 \cdot 10^{-5}$	1300	0.91	1.00
390	0.08	0.09	1400	0.91	1.00
400	0.45	0.49	1500	0.91	1.00
410	0.68	0.74	1600	0.91	1.00
420	0.77	0.84	1700	0.90	0.99
430	0.81	0.89	1800	0.90	0.99
440	0.84	0.92	1900	0.89	0.98
450	0.86	0.94	2000	0.89	0.98
460	0.87	0.96	2100	0.88	0.97
470	0.88	0.97	2200	0.88	0.97
480	0.89	0.98	2300	0.87	0.96
490	0.90	0.99	2400	0.86	0.95
500	0.90	0.99	2500	0.86	0.94
510	0.90	0.99	2600	0.83	0.91
520	0.90	0.99	2700	0.78	0.86
530	0.90	0.99	2800	0.19	0.21
540	0.91	1.00	2900	0.13	0.14
550	0.91	1.00	3000	0.11	0.12
560	0.91	1.00	3200	0.06	0.07
570	0.91	1.00	3400	0.05	0.05
580	0.90	0.99	3600	0.04	0.04
590	0.90	0.99	3800	0.05	0.05
600	0.90	0.99	4000	0.06	0.07
610	0.90	0.99	4200	0.05	0.05
620	0.90	0.99	4400	0.02	0.02
630	0.90	0.99	4600	$5 \cdot 10^{-4}$	$5 \cdot 10^{-4}$
640	0.90	0.99	4800	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$
650	0.90	0.99	5000	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$
660	0.90	0.99	5200	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$
670	0.90	0.99			
680	0.91	1.00			
690	0.91	1.00			

WHILE EVERY ATTEMPT HAS BEEN MADE TO VERIFY THE SOURCE OF THE INFORMATION, NO RESPONSIBILITY IS ACCEPTED FOR ACCURACY OF DATA.

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