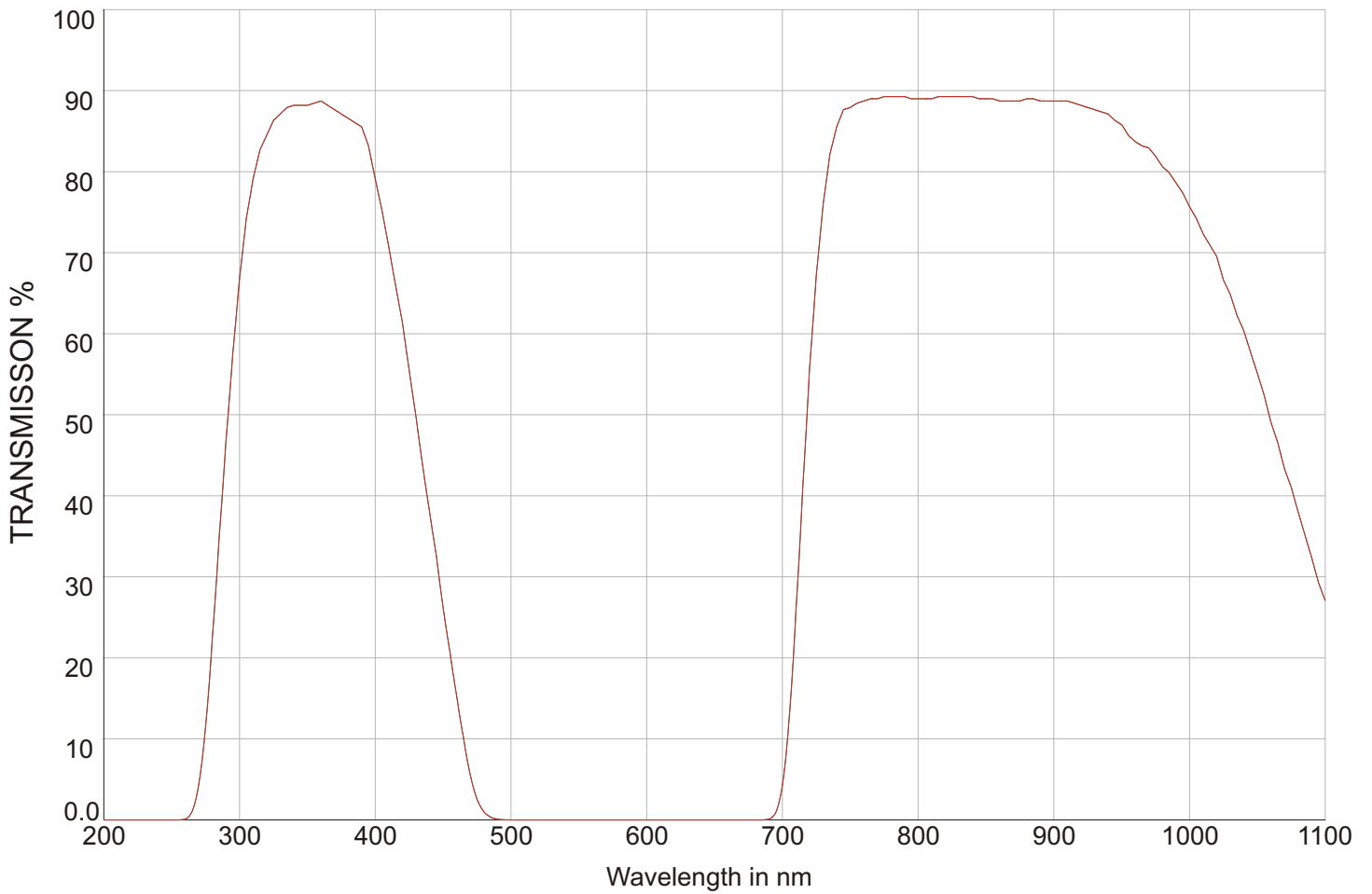


Title: Colour Glass Filter (Shortpass)
Material / Specification: Schott BG3 - 465nm
Range / Description: 465FCS



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INTERNAL TRANSMITTANCE FOR 3MM THICK

Title: Colour Glass Filter (Shortpass)
 Material / Specification: Schott BG3 - 465nm
 Range / Description: 465FCS

Reflection factor

P_d	0.92
Bubble content	
Bubble class	1
Chemical resistance	
FR class	0
SR class	1.0
AR class	1.0

Density

ρ [g/cm ³]	2.56
Transformation temperature	
T_g [°C]	478
Thermal expansion	
$\alpha_{-30/+70^\circ\text{C}}$ [10 ⁻⁶ /K]	8.8
$\alpha_{20/300^\circ\text{C}}$ [10 ⁻⁶ /K]	10.2
Temperature coefficient	
T_k [nm/°C]	

Per DIN 58191 **BP 368/185**
 Per DIN 58191

Ionically colored glass

Limit values of τ_i

for thickness $d = 1$ mm

Wave-length [nm]	Limits	Value from catalog curve
365	≥ 0.94	0.99
633	$\leq 5 \cdot 10^{-5}$	$8 \cdot 10^{-6}$

Refractive index n

λ [nm]	Element	n
302.1	Hg	1.55
435.8	Hg	1.52
587.6	He	1.51
1014	Hg	1.50

Tristimulus values

	d [mm]	x	y	Y	λ_d [nm]	P_e
A	1	0.161	0.042	1	457	0.96
2856	2	0.167	0.024	0	446	0.98
K	3	0.171	0.020	0	440	0.98
	5	0.177	0.017	0	427	0.97
	1	0.158	0.038	1	457	0.97
3200	2	0.164	0.022	0	447	0.98
K	3	0.167	0.018	0	442	0.99
	5	0.172	0.014	0	433	0.98
	1	0.154	0.029	2	455	0.98
D_{65}	2	0.160	0.018	1	448	0.99
	3	0.163	0.014	0	444	1.00
	5	0.166	0.011	0	438	1.00

Application notes

Band pass filter

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

Transmittance τ and internal transmittance $\tau_i = 1$ mm

λ [nm]	τ	τ_i	λ [nm]	τ	τ_i
200	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	700	0.33	0.36
210	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	710	0.60	0.66
220	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	720	0.78	0.85
230	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	730	0.86	0.94
240	$3 \cdot 10^{-5}$	$3 \cdot 10^{-5}$	740	0.90	0.98
250	0.006	0.006	750	0.91	0.99
260	0.09	0.10	760	0.91	0.99
270	0.33	0.36	770	0.91	0.99
280	0.58	0.63	780	0.91	0.99
290	0.73	0.80	790	0.91	0.99
300	0.83	0.90	800	0.91	0.99
310	0.87	0.95	850	0.91	0.99
320	0.89	0.97	900	0.91	0.99
330	0.90	0.98	950	0.90	0.98
340	0.91	0.99	1000	0.86	0.94
350	0.91	0.99	1060	0.75	0.81
360	0.91	0.99	1100	0.61	0.67
370	0.91	0.98	1200	0.23	0.25
380	0.90	0.98	1300	0.11	0.12
390	0.90	0.98	1400	0.14	0.15
400	0.87	0.95	1500	0.09	0.10
410	0.84	0.92	1600	0.12	0.13
420	0.80	0.87	1700	0.13	0.14
430	0.75	0.82	1800	0.14	0.15
440	0.69	0.75	1900	0.23	0.25
450	0.61	0.66	2000	0.37	0.40
460	0.51	0.55	2100	0.48	0.52
470	0.36	0.39	2200	0.57	0.62
480	0.20	0.22	2300	0.65	0.71
490	0.09	0.10	2400	0.70	0.76
500	0.04	0.04	2500	0.71	0.77
510	0.01	0.01	2600	0.71	0.77
520	0.004	0.004	2700	0.68	0.74
530	$6 \cdot 10^{-4}$	$6 \cdot 10^{-4}$	2800	0.55	0.60
540	$3 \cdot 10^{-4}$	$3 \cdot 10^{-4}$	2900	0.53	0.58
550	$6 \cdot 10^{-4}$	$6 \cdot 10^{-4}$	3000	0.52	0.57
560	0.002	0.002	3200	0.45	0.49
570	$9 \cdot 10^{-4}$	0.001	3400	0.38	0.41
580	$9 \cdot 10^{-5}$	$1 \cdot 10^{-4}$	3600	0.37	0.40
590	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	3800	0.39	0.42
600	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	4000	0.42	0.46
610	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	4200	0.37	0.40
620	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	4400	0.23	0.25
630	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	4600	0.07	0.08
640	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	4800	0.03	0.03
650	$<1 \cdot 10^{-5}$	$<1 \cdot 10^{-5}$	5000	0.007	0.008
660	$5 \cdot 10^{-5}$	$5 \cdot 10^{-5}$	5200	$3 \cdot 10^{-4}$	$3 \cdot 10^{-4}$
670	$6 \cdot 10^{-4}$	$6 \cdot 10^{-4}$			
680	0.01	0.01			
690	0.09	0.10			

