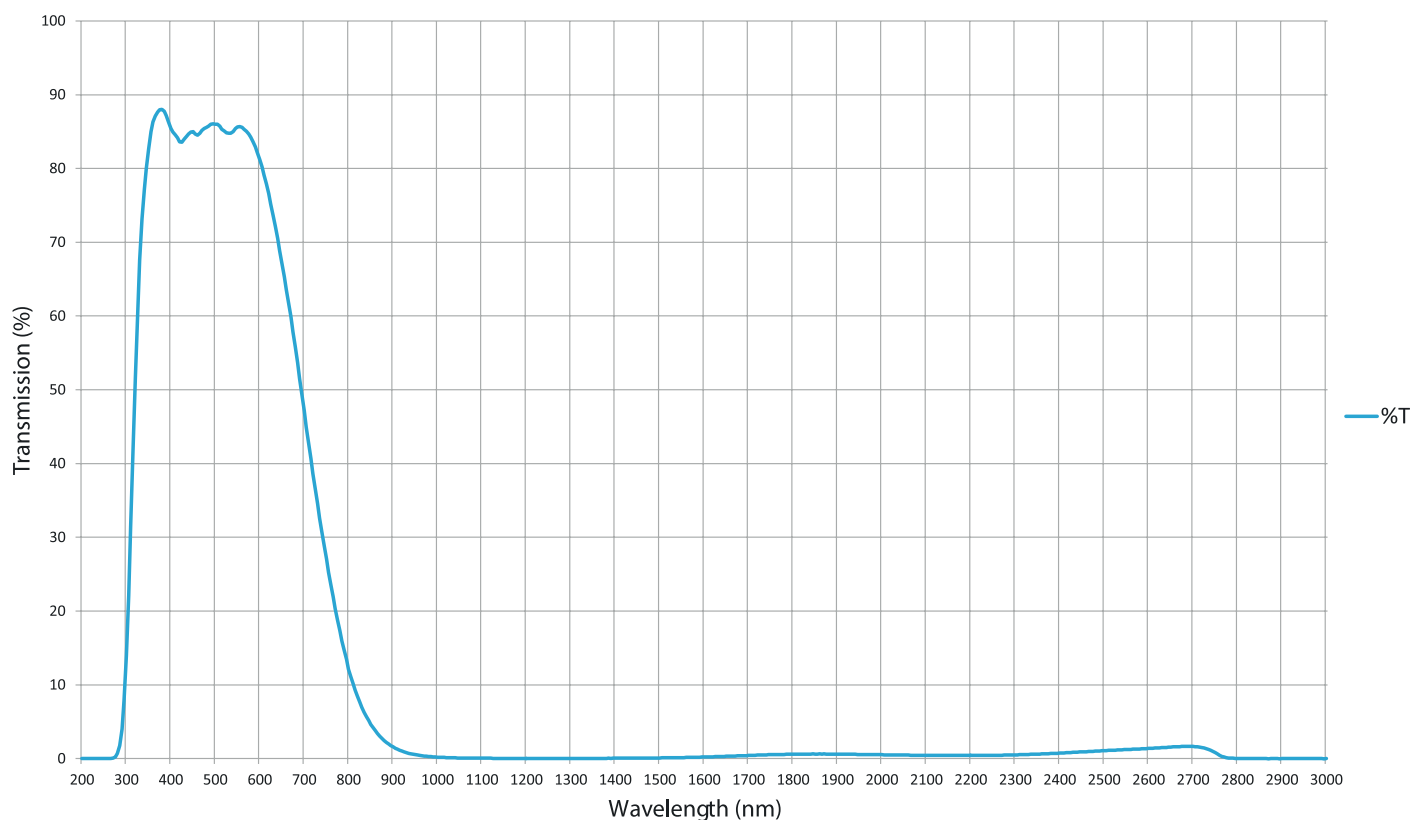


Colour glass filter

Material / Specification: 716nm shortpass (KG1 equivalent)

Range / Description: 716FCS



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Reflection factor		Density			
P_d	0.92	ρ [g/cm ³]	2.53		
Bubble content		Transformation temperature			
Bubble class		T _g [°C]	599	Per DIN 58191	KP 751
Chemical resistance		Thermal expansion		Per DIN 58191	
FR class	0	$\alpha_{-30/+70^\circ\text{C}}$ [10 ⁻⁶ /K]	5.3		
SR class	2.0	$\alpha_{20/300^\circ\text{C}}$ [10 ⁻⁶ /K]	6.1		
AR class	3.0	Temperature coefficient			
		T _k [nm/°C]			Ionically colored glass

Limit values of τ_i for thickness d = 2 mm

Wave-length [nm]	Limits	Value from catalog curve
365	≥0.89	0.94
500	≥0.92	0.94
600	≥0.88	0.92
700	≤0.68	0.66
800	≤0.33	0.29
900	≤0.10	0.08
1060	≤0.02	0.01
2200	≤0.06	0.03

Refractive index n

λ [nm]	Element	n
365	Hg	1.53
587.6	He	1.52

Tristimulus values

d [mm]	x	y	Y	λ_d [nm]	P_e	
A	1	0.444	0.409	88	506	0.01
2856	2	0.442	0.411	85	506	0.01
K	3	0.439	0.413	82	506	0.02
	5	0.433	0.416	76	506	0.03
	1	0.420	0.401	88	504	0.01
3200	2	0.418	0.402	85	504	0.01
K	3	0.415	0.404	82	504	0.02
	5	0.410	0.407	76	504	0.03
	1	0.311	0.330	89	498	0.01
D ₆₅	2	0.309	0.331	86	498	0.01
	3	0.307	0.332	83	498	0.02
	5	0.304	0.334	77	498	0.03

Application notes

Short pass filter

[1]

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

V

Transmission changes are possible under the action of intense ultraviolet radiation

Transmittance τ and internal transmittance τ_i = 2 mm

λ [nm]	τ	τ_i	λ [nm]	τ	τ_i
200	<1·10 ⁻⁵	<1·10 ⁻⁵	700	0.61	0.66
210	<1·10 ⁻⁵	<1·10 ⁻⁵	710	0.58	0.63
220	<1·10 ⁻⁵	<1·10 ⁻⁵	720	0.54	0.59
230	<1·10 ⁻⁵	<1·10 ⁻⁵	730	0.51	0.55
240	<1·10 ⁻⁵	<1·10 ⁻⁵	740	0.48	0.52
250	<1·10 ⁻⁵	<1·10 ⁻⁵	750	0.44	0.48
260	3·10 ⁻⁵	3·10 ⁻⁵	760	0.40	0.44
270	0.002	0.002	770	0.37	0.40
280	0.02	0.02	780	0.34	0.37
290	0.07	0.07	790	0.30	0.33
300	0.19	0.21	800	0.27	0.29
310	0.38	0.42	850	0.15	0.16
320	0.56	0.61	900	0.07	0.08
330	0.71	0.77	950	0.04	0.04
340	0.78	0.85	1000	0.02	0.02
350	0.83	0.90	1060	0.01	0.01
360	0.86	0.93	1100	0.009	0.01
370	0.87	0.94	1200	0.007	0.008
380	0.87	0.95	1300	0.007	0.008
390	0.87	0.95	1400	0.009	0.01
400	0.86	0.93	1500	0.02	0.02
410	0.85	0.93	1600	0.03	0.03
420	0.85	0.92	1700	0.04	0.04
430	0.85	0.92	1800	0.05	0.05
440	0.85	0.93	1900	0.05	0.05
450	0.86	0.93	2000	0.05	0.05
460	0.85	0.93	2100	0.04	0.04
470	0.86	0.93	2200	0.03	0.03
480	0.86	0.94	2300	0.04	0.04
490	0.86	0.94	2400	0.05	0.05
500	0.87	0.94	2500	0.06	0.06
510	0.87	0.94	2600	0.06	0.07
520	0.86	0.94	2700	0.06	0.07
530	0.86	0.94	2800	9·10 ⁻⁴	0.001
540	0.86	0.94	2900	9·10 ⁻⁵	1·10 ⁻⁴
550	0.87	0.94	3000	9·10 ⁻⁵	1·10 ⁻⁴
560	0.87	0.95	3200	9·10 ⁻⁵	1·10 ⁻⁴
570	0.87	0.94	3400	9·10 ⁻⁵	1·10 ⁻⁴
580	0.86	0.94	3600	5·10 ⁻⁴	5·10 ⁻⁴
590	0.86	0.93	3800	4·10 ⁻⁴	4·10 ⁻⁴
600	0.85	0.92	4000	3·10 ⁻⁵	3·10 ⁻⁵
610	0.83	0.91	4200	<1·10 ⁻⁵	<1·10 ⁻⁵
620	0.82	0.89	4400	<1·10 ⁻⁵	<1·10 ⁻⁵
630	0.80	0.87	4600	<1·10 ⁻⁵	<1·10 ⁻⁵
640	0.78	0.85	4800	<1·10 ⁻⁵	<1·10 ⁻⁵
650	0.76	0.82	5000	<1·10 ⁻⁵	<1·10 ⁻⁵
660	0.73	0.80	5200	<1·10 ⁻⁵	<1·10 ⁻⁵
670	0.71	0.77			
680	0.68	0.74			
690	0.65	0.70			