

Wratten Filter Codes and Uses

This is a listing of Wratten Filters by number, their color and applications. It was compiled from the CRC Handbook where more filters and additional characteristics are also listed.

Wratten filter

number	color	use
UV(0)	none	absorbs UV
0	clear	thickness compensation
1		absorbs UV < 360nm
1A	pale pnk	skylight filter
1B	lt. pink	(skylight) cuts blue cast in shade and distance, absorbs UV
2A	pale yellow	UV 405 nm
2B	pale yellow	absorbs UV 390 nm
2E	pale yellow	absorbs UV
3	light yellow	
4	light yellow	CCC - corrects outdoor scenes for panchromatic film
6	light yellow	(aka K1) partial correction for outdoors
8	yellow	(aka K2) full correction outdoors for Type B panchromatic film
8N5	yellow	as 8 above with +0.5 neutral density
9	deep yellow	
11	yl-grn	(aka X1) corrects tungsten light for Type B film
12	deep yellow	minus blue - haze cutting for aerial photography
13	yellow-green	(aka X2) corrects tungsten light for Type C panchromatic film
15	deep yellow	(aka G) contrast control in aerial IR photography
16	yellow-orange	blue absorbtion
18A		transmits UV and IR only
21	orange	blue and blue-green absorbtion
22	deep orange	yellow-orange (mercury yellow) increase contrast in blue
23A	light red	contrast effects
24	red	for two-color photography
25	red	(aka A) for tri-color separation, high contrast effect,
26	red	stereo red
29	deep red	high contrast, tungsten projection of tri-color, red sep. in
30		green absorbtion
31		green absorbtion
32	magenta	minus green
33	strong	green absorbtion
34A	violet	blue separation in fluorescence process
35		contrast in microscopy
36	dark violet	
38		red absorbtion
38A	Blue	red absorbtion, increasing contrast in visual microscopy
39		contrast control in printing motion pictures
40	green	two-color photography
44	light blue-green	minus red, two-color general viewing
44A	light blue-green	minus red
45		contrast in microscopy
46	blue	projection
47	blue	direct color separation, tungsten tri-color projection
47A	light blue	
47B	deep blue	tri-color separation form transparencies
48		green and red absorbtion
48A		green and red absorbtion
49	dark blue	
50	very dark blue	- mercury violet
52	lt grn	
53	middle green	

54 very dark green
55 stereo green
56 very light green
57 green for two-color photography
57A light green
58 green tri-color green for separations, contrast in photog & microscopy
59 green for tri-color projection
59A very light green
60 green for tungsten two-color photography
61 deep green green tri-color separation, tungsten projection
64 red absorption
65 red absorption
66 contrast effects in microscopy & medical photography
67A red absorption; two-color projection
70 dark red Infrared photography 676 nm
72B dark orange-yellow 605 nm
73 dark yellow-green 575 nm
74 dark green mercury green 539 nm
75 dark blue-green 488 nm
76 dark violet (compound filter) 449 nm
77 transmits 546 nm mercury line. glass plus gelatin 580 nm
77A transmits 546 nm mercury line. glass plus gelatin 582 nm
78 bluish photometric filter (visual)
78AA bluish photometric filter (visual)
78A bluish photometric filter (visual)
78B bluish photometric filter (visual)
78C bluish photometric filter (visual)
86 amber photometric filter (visual)
86A amber photometric filter (visual)
86B amber photometric filter (visual)
86C amber photometric filter (visual)
80A blue color correction for daylight film (5500) under 3200K (studio) lamps
80B blue color correction for daylight film (5500) under 3400K (photo) lamps
80C blue color cor. for daylight film (5500) under 3800K (clear flash) lamps
81 amber warming -100K
81A amber color correction for Type B tungsten film under 3400K (photo) lamps;
warming -200K
81B amber to remove blue cast in shaded daylight; warming -300K
81C amber to remove blue cast in cloudy/rainy weather; Kodachrome Type A with flash;
warming -400K
81D amber Kodachrome Type A with flash; warming -500K
81EF amber Ektachrome Type B with flash; warming -650K
82 blue cooling +100K
82A blue color correction for Type A tungsten film under 3200K (studio) lamps;
cooling +200K
82B blue color correction for Type B tungsten film under 2900K (100w incand.);
cooling +300K
82C blue to remove reddish cast in early morning or late afternoon; cooling +400K
83 amber 16mm commercial Kodachrome in daylight
85 orange color correction for Type A tungsten film in daylight (5500K->3400K)
85B orange color correction for Type B tungsten film in daylight (5500K->3200K)
85C amber converts 5500K (daylight) to 3800K lighting
79 photographic sensitometry
87 for infrared photography; IR 770nm ->
87C absorbs visual, transmits IR 830nm ->
88A for infrared photography; IR 740nm ->
89B for infrared photography; IR 700nm ->
90 monochrome viewing (narrow-band for viewing scene brightness); about 570-
>590 nm; 10% luminous transmittance
96 neutral filter for controlling luminance; 9% luminous transmittance

97 dichroic absorption
 102 correction filter for Barrier-layer cell
 106 correction filter for S-4 type photocell
 FL-day purple converts daylight fluorescent light for daylight film
 FL-W purple converts white fluorescent light for daylight film
 K2 yellow improves contrast in B&W; absorbs UV and part of violet
 G orange greatly improves contrast in B&W; absorbs UV and part of blue-green
 25A red strongest B&W contrast; absorbs UV and part of yellow; "night filter" also
 used as a color separation filter with #47 blue and #58 green
 X0 yellow-green natural rendition of skin and lips of female models; B&W
 X1 green Absorbs more red than X0, good for green trees; B&W

Data on a very few narrower band filters:

Color separation filters:

Filter no.		low l	high l	domin. l		lum. transm.
47	blue	400	475	464	2.8	
58	green	490	600	540	23.7	
25A	red	590	700	615	14	

Narrow band filters:

Filter no.		low l	high l	domin. l		lum. transm.
76		400	470	449	.046	
75		460	530	488	1.3	
74		510	570	539	4.0	
73		560	600	575	1.3	
72B		590	640	605	.74	
70		660	700	676	0.31	

This file was found in the photo-3D FTP-able archives at csg.lbl.gov.