

STOP PRESS



NEW

KODACOLOR 400 FILM

This new high-speed color negative film can be used with daylight and all types of existing low-level illumination as well as with supplementary flash. The film will be available, initially, in 135-20, 135-36, and 110-20 sizes.

Although the film is color-balanced for daylight, blue flashbulbs, and electronic flash, its special sensitizing characteristics minimize the photographic differences among various light sources so that conversion filters are not necessary to produce pleasing and acceptable color prints. For critical use, conversion filters can be employed to alter photolamp (3400 K) and tungsten (3200 K) illumination to the film's daylight balance. The film's high speed makes it ideal for dimly lighted subjects, for fast action, for extending the distance range for flash pictures, and for subjects requiring good depth of field or high shutter speeds.

The low-light performance of this film depends on the exposure capability of the camera. The 110 cartridge is intended for 110 cameras which can sense fast-speed film. A simple non-adjustable, non-automatic camera can take satisfactory pictures in daylight conditions ranging from bright sunlight to heavy overcast or open shade. If the camera has a fast lens in the $f/5.6$ to $f/2.8$ range, pictures can be taken in all daylight conditions and in many existing-light situations such as brightly lighted sports arenas, stage sets, and interiors with bright fluorescent lights. With a lens aperture of $f/2$ or faster and a slow shutter speed such as $1/30$ second, pictures can be taken in the home at night under normal existing-light levels (approximately 5-footcandle illumination). At light levels lower than these, flash or time exposures may be necessary.

If this film is used in cameras designed only for normal speed such as KODACOLOR II Film, the capability of the camera will be extended to the lower lighting levels indicated above. However, in very bright daylight and at close flash range, this film may be overexposed beyond its wide exposure latitude, resulting in some loss of picture quality.

Film Handling and Storage

Due to the high speed of this film, load and unload your camera in subdued light.

Store unexposed or exposed film, as well as finished negatives, in a cool, dry, dark place. For additional information, see Kodak Pamphlet No. E-30, Storage and Care of KODAK Color Films. Process exposed film promptly.

Film Speed and Filter Recommendations for Critical Use

Light Source	KODAK WRATTEN Filter	Speed	
		ASA	DIN
Daylight	none	400	27
Photolamp(3400K)	No.80B	125	22
Tungsten(3200K)	No.80A	100	21

Note: If your camera has a built-in exposure meter that makes the reading through a filter used over the lens, see your camera manual for instructions on exposure with filters.

Daylight Exposure

For adjustable cameras without exposure meters, the following daylight exposure and existing-light tables can be used as guides:

The table is for average subjects in daylight from 2 hours after sunrise to 2 hours before sunset:

Shutter Speed 1/500 Second	Shutter Speed 1/250 Second			
Bright or Hazy Sun on Light Sand or Snow	Bright or Hazy Sun (Distinct Shadows)	Cloudy Bright (No Shadows)	Heavy Overcast	Open Shade
<i>f/16</i>	<i>f/16*</i>	<i>f/8</i>	<i>f/5.6</i>	<i>f/5.6+</i>

**f/8* at 1/250 second for backlighted close-up subjects.

+Subject shaded from the sun but lighted by a large area of sky

Electronic and Blue-Flash Exposure

No filter required.

Flash guide numbers for electronic flash and blue flash bulbs are given on the film instruction sheet.

Determine the *f*-number by dividing the guide number by the distance in feet from flash to subject.

If your flash negatives are consistently underexposed, use a lower guide number; if overexposed, use a higher guide number.

Safelight Recommendations

Safelights are not recommended. The unprocessed film must be handled in total darkness.

Existing-Light Suggested Exposures (ASA 400, No Filter)

Picture Subject and Lighting	Shutter Speed	Lens Opening
Home Interiors at Night—		
Areas with Bright Light	1/30	<i>f/2.8</i>
Areas with Average Light	1/30	<i>f/2</i>
Interiors with Bright Fluorescent Light	1/60	<i>f/4</i>
Indoor, Outdoor Christmas Lighting at Night	1/15*	<i>f/2</i>
Brightly Lighted Street Scenes at Night	1/60	<i>f/2.8</i>
Neon Signs, Other Lighted Signs at Night	1/125	<i>f/4</i>
Store Windows at Night	1/60	<i>f/4</i>
Floodlighted Buildings, Fountains, Monuments	1/15*	<i>f/2</i>
Fairs, Amusement Parks at Night	1/30	<i>f/2.8</i>
Night Football, Racetracks	1/125	<i>f/2.8</i>
Basketball, Hockey, Bowling	1/125	<i>f/2</i>
Stage Shows-Average Lighting (bright lighting 2 stops less)	1/60	<i>f/2.8</i>
Circuses-Floodlighted Acts	1/60	<i>f/2.8</i>
Ice Shows-Floodlighted Acts	1/125	<i>f/2.8</i>
Ice Shows, Circuses-Spotlighted Acts	1/250	<i>f/2.8</i>
School-Stage and Auditorium	1/30	<i>f/2</i>

*Use a camera support for exposure times longer than 1/30 second.

Reciprocity

To compensate for reciprocity effects, use the following filters and exposure adjustments as a starting point:

Exposure Time (Seconds)	KODAK Color Compensating Filter	Exposure Increase (Camera Stops)
1/10,000	None	None
1/1000	None	None
1/100	None	None
1/10	None	None
1	None	1/2
10	None	1
100	None	2

This information, rounded to the nearest one-half stop, is based on average emulsions and assumes normal recommended processing. It should be used as a guide only. The adjustments are subject to change due to normal manufacturing variations and subsequent film-storage conditions between manufacturing and processing.

