KODAK ADVANTIX
100, 200, and 400 Films

INTRODUCTION

Welcome to the innovative world of the Advanced Photo System! KODAK ADVANTIX Films are the heart of this new system—they capture your image photographically *and* can store scene data (e.g., picture format) magnetically or optically on the film.

ADVANTIX Films are provided in *KODAK Film Safe Cassettes* that enable drop-in loading and feature double-exposure protection. The cassettes include an indicator that identifies the status of the film inside individual cassettes. Negatives produced on these films will be returned to you inside their original *Film Safe Cassette* for easy storage and retrieval

FEATURES	BENEFITS
• KODAK Film Safe Cassette	• Worry-free, drop-in loading
	• Automatic film threading and rewinding
	• Safe storage of negatives
• Film Status Indicator (FSI) on cassette	• Conveys status of film inside cassette—unexposed, partially exposed, exposed, or processed
• Information Exchange (IX)	• Exposure and print format data recorded on film to optimize print quality

THE *KODAK ADVANTIX* SYSTEM

Components

The components of the KODAK ADVANTIX System—the films, cameras, and photofinishing equipment—were designed "from the ground up," to provide you with **great pictures.** You can use ADVANTIX Films in any camera designed for the Advanced Photo System to get the pictures you want—*the way you want them.*

Film Magnetics

ADVANTIX Films are coated with a transparent magnetic material that can record a variety of data including

- format selected (i.e., classic, HDTV/group, panoramic)
- camera orientation
- illumination (e.g., flash, backlighting, etc)*
- picture-taker recorded data*

The magnetics are part of the information exchange between camera, film, and photofinishing equipment that helps optimize print quality.

*This information is available only from *some cameras.*

Film Selector

Kodak has a variety of ADVANTIX Films to suit your particular applications.

ADVANTIX 100 Film—designed to deliver superior performance. The color film of choice for picture-taking under bright sunlight. Ideal for enlargements and outdoor panoramic scenes, and for use in advanced cameras that feature sophisticated exposure control. It incorporates KODAK T-GRAIN™ Emulsions for fine grain and sharpness.

ADVANTIX 200 Film—offers a superlative balance of speed, sharpness, grain, and rich, more saturated colors. An enhanced, multi-purpose color film intended for everyday picture-taking under a variety of lighting conditions. It incorporates T-GRAIN Emulsions.

ADVANTIX 400 Film—an excellent color film for low-light, fast action, or zoom photography, or when you need extended flash range. It incorporates T-GRAIN Emulsions to provide sharpness usually associated with lower-speed films.

New **KODAK ADVANTIX Black & White + 400 Print Film**—presents an opportunity to explore the world of black-and-white photography. This film is an excellent choice for all lighting conditions—daylight, indoors, low-light, fast action, or zoom photography, or when you need extended flash range. It also incorporates T-GRAIN Emulsions to provide sharpness usually associated with lower-speed films. This film must be processed in KODAK FLEXICOLOR Chemicals, Process C-41.

SIZES AVAILABLE

KODAK ADVANTIX 100 Film

Exposures	APS Format
25	IX 240

KODAK ADVANTIX 200 Film

Exposures	APS Format
15, 25, and 40	IX 240

KODAK ADVANTIX 400 Film

Exposures	APS Format
25 and 40	IX 240

Note: The number of exposures per roll is **not** dependent on the format you select. See "PRINT FORMATS" on Page 4 for more information.

STORAGE

Store unexposed film at 70˚ F (21˚C) or lower. Always store film (exposed or unexposed) in a cool, dry place. Process film as soon as possible after exposure.

HANDLING

Important: Do not disassemble the cassette.

The digital data stored on the magnetic layer of ADVANTIX Films should not be affected by airport x-ray inspection stations.

Film Status Indicator

There are four symbols on one end of the cassette. A gray indicator identifies the status of the film inside the cassette: (1) ● = unexposed; (2) ◗ = partially exposed; (3) ✘ = exposed (unprocessed); and (4) ▮ = processed (negatives).

Camera Loading

When the FSI is at ●, the cassette is ready to load into a camera designed for the Advanced Photo System; this type of camera features drop-in loading. It is not necessary to "feed" or thread the film to load it—the camera will thread the film automatically. (*Do not* open the cassette; unprocessed film will be fogged if you open it.) For more information, see your camera manual.

Mid-Roll Change: If your camera offers this feature, you can change cassettes before you completely expose the current cassette. This feature helps ensure that you have the right film type in your camera for every picture-taking situation. It also allows you to separate your cassettes by photo subject.

If you use this feature, the FSI will be at ◗ when you remove the cassette from your camera. The information exchange (IX) between your camera and the film will keep track of the number of exposures remaining. As a reference, you can write the number of exposures left in the area on the cassette marked "NOTES." Reload the cassette at any time to finish exposing the film.

Rewind Button: If your camera has a rewind button and you don't want to take all the pictures available on the film, you can press the rewind button on the camera and send the cassette for processing. Once you've used this feature, you *cannot* change your mind and reload the same film cassette into the camera.

EXPOSURE

Film Speed—Automatic Cameras

In automatic cameras designed for the Advanced Photo System, the film speed is set automatically when film is loaded into the camera.

Film Speed—Manual Cameras

For Advanced Photo System cameras that allow manual adjustments (marked for ISO, ASA, or DIN speeds or exposure indexes), use the speed numbers in the table below. ADVANTIX Films are specially sensitized to be tolerant of mixed lighting conditions; the filter recommendations are suggested for uniform illumination.

Do not change the film-speed setting when you use a filter if your camera has through-the-lens metering.

KODAK Film	ISO/DIN Speed and KODAK WRATTEN Gelatin Filter*		
	Daylight	Photolamp (3400 K)	Tungsten (3200 K)
ADVANTIX 100	100	32/16˚ No. 80B	25/15˚ No. 80A
ADVANTIX 200	200	64/19˚ No. 80B	50/18˚ No. 80A
ADVANTIX 400	400	125/22˚ No. 80A	100/21˚ No. 80A

* For best results without special printing.

Daylight: Use the exposures in the table below for average frontlit subjects from 2 hours after sunrise to 2 hours before sunset.

Lighting Conditions	Shutter Speed (second) and Lens Opening		
	ADVANTIX 100	ADVANTIX 200	ADVANTIX 400
Bright or Hazy Sun on Light Sand or Snow	1/125 ƒ/16	1/250 ƒ/16	1/500 ƒ/16
Bright or Hazy Sun (Distinct Shadows)*	1/125 ƒ/11	1/250 ƒ/11	1/500 ƒ/11
Weak, Hazy Sun (Soft Shadows)	1/125 ƒ/8	1/250 ƒ/8	1/500 ƒ/8
Cloudy Bright (No shadows)	1/125 ƒ/5.6	1/250 /5.6	1/500 ƒ/5.6
Heavy Overcast or Open Shade†	1/125 ƒ/4	1/250 ƒ/4	1/500 ƒ/4

* Use ƒ/5.6 for backlit close-up subjects.
† Subjects shaded from the sun but lighted by a large area of clear sky.

Electronic Flash: Whenever possible, it's a good idea to use a flash—even outdoors. In daylight, flash can lighten facial shadows and brighten dark shadows. Flash can also be useful for action photography to stop the action.

Use the appropriate guide number in the table below as a starting point for your equipment. Select the unit output closest to the number given by your flash manufacturer. Then find the guide number for feet or metres.

To determine the lens opening, divide the guide number by the flash-to-subject distance. If negatives are too dark (overexposed), use a higher guide number; if they're too light (underexposed), use a lower number.

Unit Output (BCPS)*	Guide Number Distances in Feet/Metres		
	ADVANTIX 100	ADVANTIX 200	ADVANTIX 400
350	40/12	60/18	85/26
500	50/15	70/21	100/30
700	60/18	85/26	120/36
1000	70/21	100/30	140/42
1400	85/26	120/36	170/50
2000	100/30	140/42	200/60
2800	120/36	170/50	240/70
4000	140/42	200/60	280/85
5600	170/50	240/70	340/105
8000	200/60	280/85	400/120

* BCPS = beam candlepower seconds

Fluorescent and High-Intensity Discharge Lamps: For best results without special printing, use the color-correction filters in the table below as starting points when you expose these films under fluorescent and high-intensity discharge lamps. Use exposure times of 1/60 second or longer to avoid the brightness and color variations that occur during a single alternating-current cycle.

Type of Fluorescent Lamp	KODAK Color Compensating Filters	Exposure Adjustment
Daylight	40R	$+^2/_3$ stop
White	20C + 30M	+1 stop
Warm White	40B	+1 stop
Warm White Deluxe	30B + 30C	$+1^1/_3$ stops
Cool White	30M	$+^2/_3$ stop
Cool White Deluxe	20C + 10M	$+^2/_3$ stop

Note: When you don't know the type of fluorescent lamps, try a 10C + 20M filter combination and increase exposure by $^2/_3$ stop; color rendition may be less than optimum.

Type of High-Intensity Discharge Lamp	KODAK Color Compensating Filters	Exposure Adjustment
High-Pressure Sodium Vapor	70B + 50C	+3 stops
Metal Halide	10R + 20M	$+^2/_3$ stop
Mercury Vapor	20R + 20M	$+^2/_3$ stop
Clear Mercury Vapor	80R	$+1^1/_3$ stops

Adjustments for Long and Short Exposures: You do not need to make any exposure or filter adjustments for exposure times of 1/10,000 second to 10 seconds.

PRINT FORMATS

With your Advanced Photo System camera, you can expose any combination of three formats—Classic (C), HDTV/Group (H), and Panoramic (P)—on each cassette of film; for more information, see your camera manual. For print sizes, see the following table.

Important: Your photo-processing cost will be based on the format(s) you select.

Paper Width	Print Sizes* from Format Selected		
	Classic (C)	HDTV/Group (H)	Panoramic (P)
3.5 in. (8.9 cm)	3.5 x 5 in. (8.9 x 12.7 cm) or 3.5 x 5.25 in. (8.9 x 13.3 cm)	3.5 x 6 in. (8.9 x 15.2 cm)	3.5 x 10 in. (8.9 x 25.4 cm)
4 in. (10.2 cm)	4 x 6 in. (10.2 x 15.2 cm)	4 x 7 in. (10.2 x 17.8 cm)	4 x 10 in. (10.2 x 25.4 cm) or 4 x 11.5 in. (10.2 x 29.2 cm)

* Final print size depends on your photofinisher.

PROCESSING

When the FSI is at ✕, have your film processed promptly by a photofinisher that displays the logo shown above.

The photofinisher will return the film cassette with your prints; your negatives will be inside the cassette and the FSI will be at ▎. You will receive an index print that shows the images of the negatives inside the cassette. *Do not disassemble the cassette.* Store the cassette in a cool, dry place with the index print. You can use the KODAK ADVANTIX Memory Keeper to store 12 cassettes and index prints.
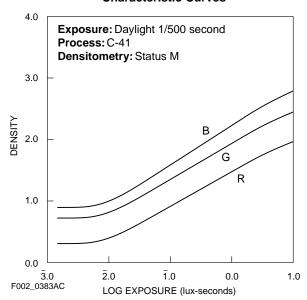
Note: Photofinishers that provide a certified service are required to produce the following features of the Advanced Photo System:

• Interspersed aspect ratio prints

• Print personalization via backprinting

• Print quality improvement from camera data
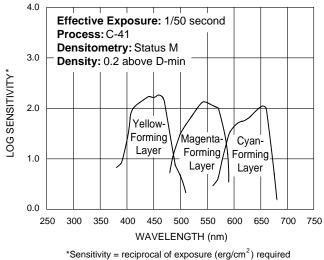
• Negatives returned in cassette

• Index print

Reprints and Enlargements: To order reprints or enlargements, refer to your index print or the information on the back of your photos, and return the cassette to your dealer.

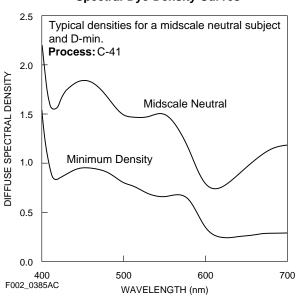# KODAK ADVANTIX 100 Film

Characteristic Curves

Exposure: Daylight 1/500 second
Process: C-41
Densitometry: Status M

DENSITY

LOG EXPOSURE (lux-seconds)

B

G

R

F002_0383AC

Spectral-Sensitivity Curves

Effective Exposure: 1/50 second
Process: C-41
Densitometry: Status M
Density: 0.2 above D-min

LOG SENSITIVITY*

WAVELENGTH (nm)

Yellow-Forming Layer

Magenta-Forming Layer

Cyan-Forming Layer

*Sensitivity = reciprocal of exposure (erg/cm^2) required to produce specified density

F002_0384AC

Spectral-Dye-Density Curves

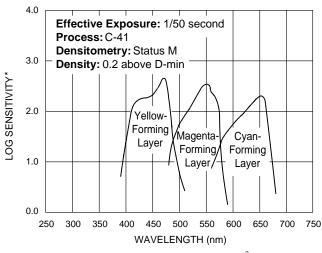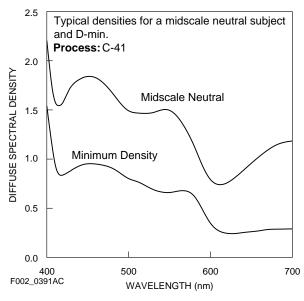Typical densities for a midscale neutral subject and D-min.
Process: C-41

DIFFUSE SPECTRAL DENSITY

WAVELENGTH (nm)

Midscale Neutral

Minimum Density

F002_0385AC

KODAK ADVANTIX 200 Film

Characteristic Curves

Exposure: Daylight 1/100 second
Process: C-41
Densitometry: Status M

DENSITY

B
G
R

LOG EXPOSURE (lux-seconds)

F002_0389AC

Spectral-Sensitivity Curves

Effective Exposure: 1/50 second
Process: C-41
Densitometry: Status M
Density: 0.2 above D-min

LOG SENSITIVITY*

Yellow-Forming Layer

Magenta-Forming Layer

Cyan-Forming Layer

WAVELENGTH (nm)

*Sensitivity = reciprocal of exposure (erg/cm^2) required to produce specified density

F002_0390AC

Spectral-Dye-Density Curves
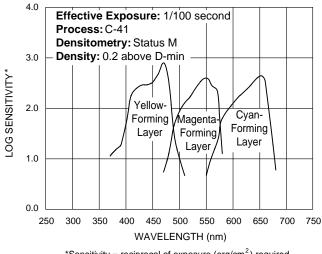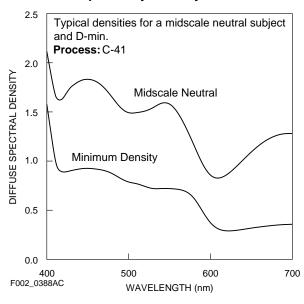
Typical densities for a midscale neutral subject and D-min.
Process: C-41

DIFFUSE SPECTRAL DENSITY

Midscale Neutral

Minimum Density

WAVELENGTH (nm)

F002_0391AC

KODAK ADVANTIX 400 Film

Characteristic Curves

Exposure: Daylight 1/2000 second
Process: C-41
Densitometry: Status M

DENSITY

B
G
R

LOG EXPOSURE (lux-seconds)

F002_0386AC

Spectral-Sensitivity Curves

Effective Exposure: 1/100 second
Process: C-41
Densitometry: Status M
Density: 0.2 above D-min

LOG SENSITIVITY*

Yellow-Forming Layer

Magenta-Forming Layer

Cyan-Forming Layer

WAVELENGTH (nm)

*Sensitivity = reciprocal of exposure (erg/cm^2) required to produce specified density

F002_0387AC

Spectral-Dye-Density Curves

Typical densities for a midscale neutral subject and D-min.
Process: C-41

DIFFUSE SPECTRAL DENSITY

Midscale Neutral

Minimum Density

WAVELENGTH (nm)

F002_0388AC

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KODAK ADVANTIX 100, 200, and 400 Films

Consumer Imaging
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