

# KODAK PROFESSIONAL EKTAPRESS Films



This portfolio of professional color negative films is intended for 35 mm location shooting, such as photojournalism. These films are designed for exposure with daylight or electronic flash, but they can also be exposed with other light sources. KODAK PROFESSIONAL EKTAPRESS Films are excellent choices when negatives will be electronically scanned.

KODAK PROFESSIONAL EKTAPRESS Film PJ100 features excellent sharpness and highlight detail and very fine grain; it allows a very high degree of enlargement. Suggested uses of PJ100 Film include editorial, feature, studio, and corporate and industrial photography.

KODAK PROFESSIONAL EKTAPRESS Film PJ400 features unsurpassed sharpness and fine grain, excellent highlight and shadow detail, and good push-process performance to EI 1600. Suggested applications of PJ400 Film include editorial, feature, spot news, and corporate and industrial photography.

An improved version of KODAK PROFESSIONAL EKTAPRESS Film PJ800, Kodak Professional's first 800-speed film, is now available with finer grain. It provides photographers with a high-speed color negative film with rich and accurate colors, unsurpassed sharpness, excellent shadow detail, and good push-processing performance to EI 3200. Suggested applications of PJ800 Film include sports, spot news, corporate and industrial, and runway fashion photography.

FEATURES	BENEFITS
<b>PJ100, PJ400, and PJ800 Films also offer the following ease-of-use features—</b>	
• 3/4-inch square notes area on the film magazine	• More space to indicate subject notes or exposure/ processing conditions
• Writable magazine surface; improved texture	• Readily accepts indelible markers or pencils • Reduces glare under harsh lighting
• Translucent ("frosted") film cans	• Easier identification • More area for exposure/ processing notes
• 5- and 20-roll Pro-Packs	• Convenient sizes for short or long assignments • Pro-Pack 20 includes a plastic film bag for easy transport
• Improved film support	• Better quality scans and prints

FEATURES	BENEFITS
• Wide exposure latitude	• Rich, accurate colors maintained with under- and overexposure
• Room-temperature storage	• Ideal when conditions prohibit refrigerated storage
• Consistent scanning performance	• Saves time, less need for scanner adjustments
• PJ100 Film—extremely fine grain with excellent sharpness and highlight detail	• Provides maximum image quality under relatively bright daylight or flash conditions • Excellent for making high-quality enlargements
• PJ400 Film—unsurpassed sharpness; fine grain; excellent highlight and shadow detail	• Provides a wide range of exposures for action shots and lighting conditions
• PJ800 Film—unsurpassed sharpness and excellent shadow detail	• Provides a very wide exposure latitude—EI 200 to 3200 • Excellent for stopping action and for a variety of lighting conditions • Finer grain

## STORAGE AND HANDLING

Load and unload film in subdued light.

Store unexposed film at 70°F (21°C) or lower in the *original sealed package*. Always store film (exposed or unexposed) in a cool, dry place. Process film as soon as possible after exposure. Protect negatives from strong light. For more information about storing negatives, see KODAK Publication No. E-30, *Storage and Care of KODAK Photographic Materials—Before and After Processing*.

**Note:** High-speed film, such as PJ800 Film, is sensitive to environmental radiation. Expose and process this film promptly. As exposure to radiation is cumulative, you may also want to request *visual* inspection of PJ800 Film at airport and other security x-ray inspection stations.

## DARKROOM RECOMMENDATIONS

Do not use a safelight. Handle unprocessed film in total darkness.

## EXPOSURE

### Exposure Compensation

For light sources other than daylight, use the filtration and exposure compensation in the table below.

Light Source	KODAK WRATTEN Gelatin Filter	Exposure Compensation* (lens stops)
Photolamp (3400 K)	No. 80B	+1 $\frac{2}{3}$
Tungsten (3200 K)	No. 80A	+2

\* SLR cameras will automatically make the exposure compensation when metering through a filter.

## Daylight

Recommended exposures in the table below are for frontlit subjects from 2 hours after sunrise to 2 hours before sunset when you expose each of these films at its *nominal speed*.

Lighting Conditions	Shutter Speed (second) and Lens Opening—EKTAPRESS Film		
	PJ100	PJ400	PJ800
Bright or Hazy Sun on Light Sand or Snow	1/125 f/16	1/500 f/16	1/1000 f/16
Bright or Hazy Sun (Distinct Shadows)	1/125 f/11*	1/500 f/11*	1/1000 f/11*
Weak, Hazy Sun (Soft Shadows)	1/125 f/8	1/500 f/8	1/1000 f/8
Cloudy Bright (No Shadows)	1/125 f/5.6	1/500 f/5.6	1/1000 f/5.6
Heavy Overcast or Open Shade†	1/125 f/4	1/500 f/4	1/1000 f/4

\* Use f/5.6 for backlit close-up subjects.

† Subject shaded from the sun but lighted by a large area of clear sky.

## Electronic Flash

Use the guide numbers in the table below as a starting point for your equipment when you expose each of these films at its *nominal speed*. 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.

Unit Output (BCPS*)	Guide Number Distances in Feet/Metres EKTAPRESS Film		
	PJ100	PJ400	PJ800
350	40/12	85/26	120/36
500	50/15	100/30	140/42
700	60/18	120/36	170/50
1000	70/21	140/42	200/60
1400	85/26	170/50	240/70
2000	100/30	200/60	280/85
2800	120/36	240/70	330/100
4000	140/42	280/85	400/120
5600	170/50	340/100	470/140
8000	200/60	400/120	560/170

\* BCPS = beam candlepower seconds

## Adjustments for Long and Short Exposures

For EKTAPRESS PJ100 and PJ400 Films, no filter corrections or exposure adjustments are required for exposure times of 1/10,000 second to 10 seconds; for EKTAPRESS PJ800 Film, no adjustments are required for exposures from 1/10,000 second to 1 second. At longer exposure times, exposure compensation is required.

## PROCESSING

Process these films in KODAK FLEXICOLOR Chemicals for Process C-41 using automated or manual processing techniques.

### PJ100 Film

<b>Exposure Index</b>	100
<b>Development Time (minutes:seconds)</b>	3:15

### PJ400 Film

<b>Exposure Index</b>	400	800 Push 1	1600 Push 2
<b>Development Time (minutes:seconds)</b>	3:15	3:45	4:15

### PJ800 Film

<b>Exposure Index</b>	800	1600 Push 1	3200 Push 2
<b>Development Time (minutes:seconds)</b>	3:15	3:45	4:15

**Note:** These times are starting points. Make tests to determine the best development time for your application.

## JUDGING NEGATIVE EXPOSURE

You can check the exposure level with a suitable electronic densitometer equipped with a filter such as a KODAK WRATTEN Gelatin Filter No. 92 or the red filter for Status M densitometry. Depending on the subject and the light source used for exposure, a normally exposed and processed color negative measured through the red filter should have the approximate densities listed below.

Because of the extreme range in skin color, use the red density values for a normally lit forehead only as a guide. For best results, use a *KODAK Gray Card* (gray side), KODAK Publication No. R-27.

Area Measured	EKTAPRESS Film Density Reading				
	PJ100	PJ400	PJ400 (EI 800) Push 1	PJ800	PJ800 (EI 1600) Push 1
<i>KODAK Gray Card</i> (gray side) receiving same illumination as subject	0.80 to 1.00	0.84 to 1.04	0.80 to 1.00	0.85 to 1.05	0.80 to 1.00
Lightest step (darkest in negative) of <i>KODAK Paper Gray Scale</i> receiving same illumination as subject	1.20 to 1.40	1.20 to 1.40	1.19 to 1.39	1.10 to 1.30	1.10 to 1.30
Highest diffuse density on normally lighted forehead —light complexion	1.10 to 1.35	1.10 to 1.40	1.07 to 1.37	1.00 to 1.30	1.00 to 1.30
—dark complexion	0.90 to 1.25	0.92 to 1.28	0.90 to 1.26	0.87 to 1.22	0.82 to 1.17

## PRINTING NEGATIVES

You can make color prints by direct contact printing or enlarging on KODAK PROFESSIONAL ULTRA, SUPRA, or PORTRA Papers or KODAK DURAFLEX® RA Print Material.

Make slides by direct exposure onto KODAK VERICOLOR Slide Film. Make display transparencies on KODAK DURATRANS® RA Display Material, DURACLEAR™ RA Display Material, or KODAK VERICOLOR Print Film.

Make black-and-white prints on KODAK PANALURE SELECT RC Paper or KODAK EKTAMAX RA Professional Paper.

## SCANNING NEGATIVES

You can easily scan EKTAPRESS Film negatives with a variety of linear-array-CCD, area-array-CCD, and PMT film scanners. You can scan negatives on desktop scanners as well as high-end drum scanners.

Because no standards exist to define the colored filter sets that film scanners use to capture the red, green, and blue information of the film image, each manufacturer's scanner has its own characteristic output. The output depends on the scanner's sensitivity to the dyes in the film. This sensitivity is determined by the spectral distribution of the colored filter sets and/or the spectral sensitivity of the charge-coupled-device (CCD). In addition to these spectral specifications, scanner output depends on the look-up tables or matrices that the scanner uses to output information for CRT monitors, transmission, etc. These tables or matrices are part of either "plug-in" programs used with specific software packages designed for image manipulation, updateable ROMs included with the equipment, or fixed algorithms for calibrating and balancing, similar to those used in photographic color printing equipment.

The generic "color negative film" channel designation available with scanner software is only a starting point. You can adjust the final color balance and the scene-dependent contrast and brightness of an image by using the scanner's controls during pre-scan, or by using an image-manipulation software program or workstation after acquisition.

When scanning EKTAPRESS Films with KODAK PROFESSIONAL RFS 2035, 2035 Plus, 3570, or 3570 Plus Film Scanners, be sure to use the most recent scanner driver with updated film terms. To verify that you have the latest software release, contact your Kodak representative or visit our site at [www.kodak.com/go/professional](http://www.kodak.com/go/professional).

Some scanners allow you to use "plug-in" programs to make calibrations based on D-min film stock. Because different types of color negative films have different colored-coupler masks, the optimum D-min balance is different for each type of film. Therefore, for optimum results, set up a specific channel for each type of film you are scanning.

## KODAK Photo CD Imaging Workstation (PIW)

Photo CD Film Term tables store information that determines the tone scale and color reproduction characteristics of a Photo CD image. These tables also contain photographic information about different types of film and parameters specific to each film.

Photo CD Film Term tables are intended for use by owners and operators of KODAK Photo CD Imaging Workstations (PIWs), and can be downloaded from our site at [www.kodak.com/global/en/service/software/filmTerms/pcdFilmTerms.shtml](http://www.kodak.com/global/en/service/software/filmTerms/pcdFilmTerms.shtml). PIW Film Term Version 6.5.7 ADDS contains the film term for PJ800, generation 2.

## IMAGE STRUCTURE

### Print Grain Index

The Print Grain Index number refers to a method of defining graininess in a print made with diffuse-printing illumination. It replaces rms granularity and has a different scale which cannot be compared to rms granularity.

- This method uses a uniform perceptual scale, with a change of four units equaling a *just-noticeable difference* in graininess for 90 percent of observers.
- A Print Grain Index rating of 25 on the scale represents the approximate visual threshold for graininess. A higher number indicates an increase in the amount of graininess observed.
- The standardized inspection (print-to-viewer) distance for all print sizes is 14 inches, the typical viewing distance for a 4 x 6-inch print.
- Print Grain Index numbers may not represent graininess observed from more specular printing illuminants, such as condenser enlargers.
- In practice, larger prints will likely be viewed from distances greater than 14 inches, which reduces apparent graininess.

To determine the Print Grain Index numbers listed below, prints were made from 135-size (24 x 36 mm) negatives. In each case, the viewing distance was the standard 14 inches.

Print Size (inches)	4 x 6	8 x 10	16 x 20
Magnification	4.4X	8.8X	17.8X
EKTAPRESS Film	Print Grain Index No.		
PJ100	28	50	79
PJ400	41	62	92
PJ800	53	75	104

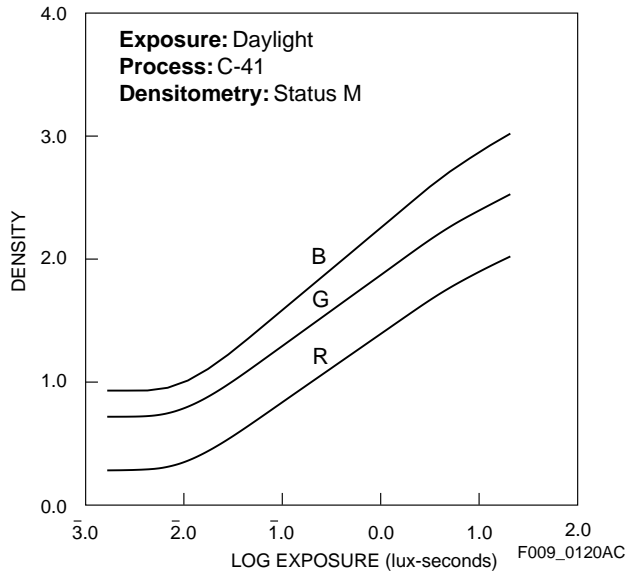
For more information, see KODAK Publication No. E-58, *Print Grain Index—An Assessment of Print Graininess from Color Negative Films*.

# KODAK PROFESSIONAL EKTAPRESS FILM PJ100

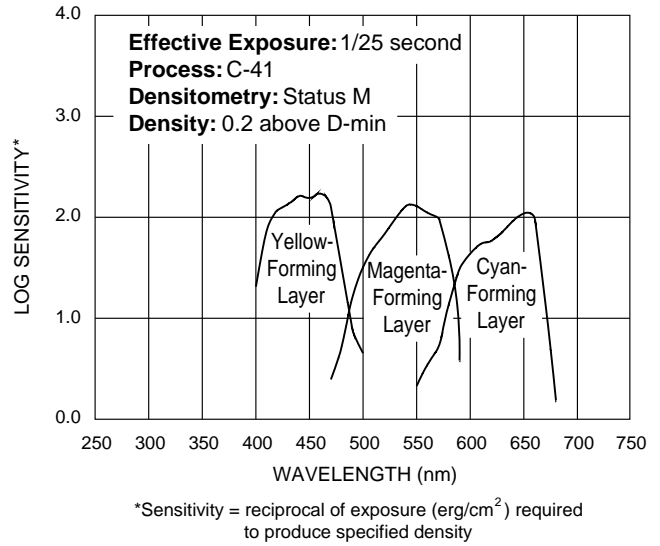
## Image-Structure Data

Sharpness:	Extremely High
Degree of Enlargement:	Very High

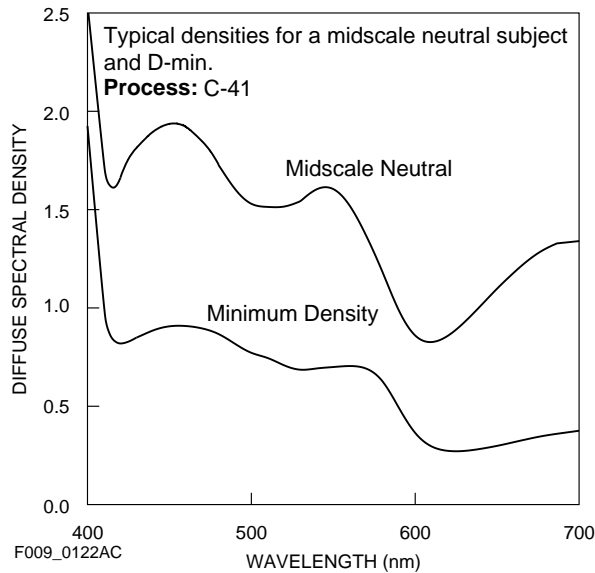
### Characteristic Curves



### Spectral-Sensitivity Curves



### Spectral-Dye-Density Curves



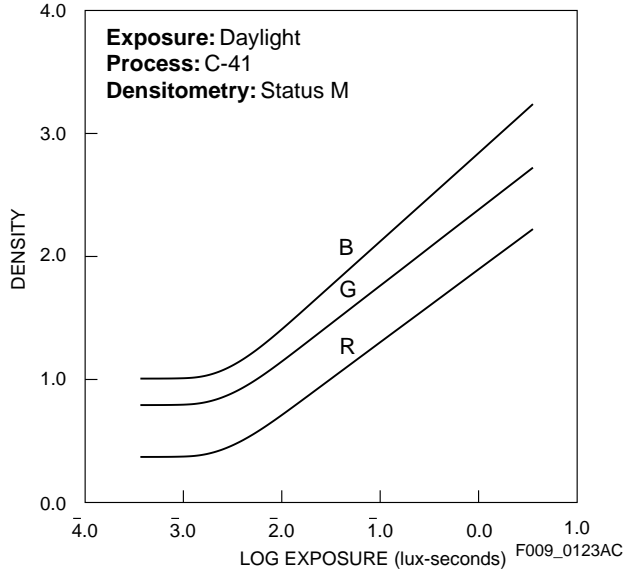
**NOTICE:** The sensitometric curves and data in this publication represent product tested under the conditions of exposure and processing specified. They are representative of production coatings, and therefore do not apply directly to a particular box or roll of photographic material. They do not represent standards or specifications that must be met by Eastman Kodak Company. The company reserves the right to change and improve product characteristics at any time.

# KODAK PROFESSIONAL EKTAPRESS FILM PJ400

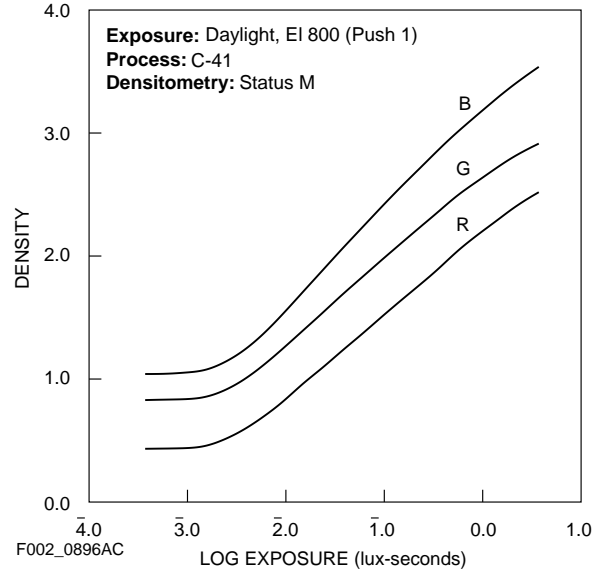
## Image-Structure Data

Sharpness:	High
Degree of Enlargement:	High

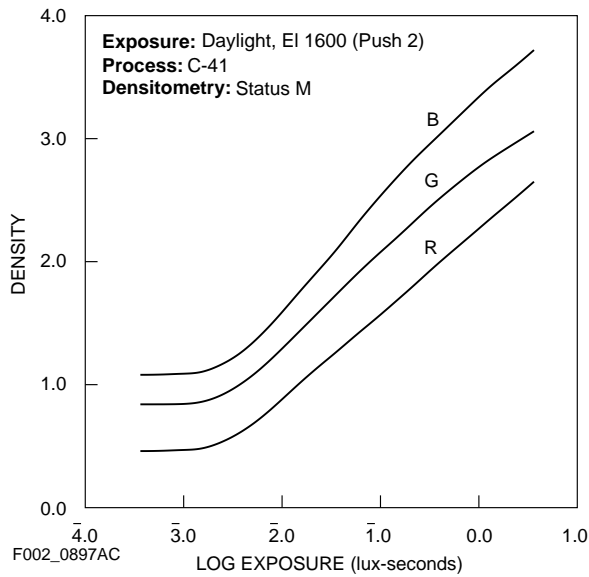
### Characteristic Curves



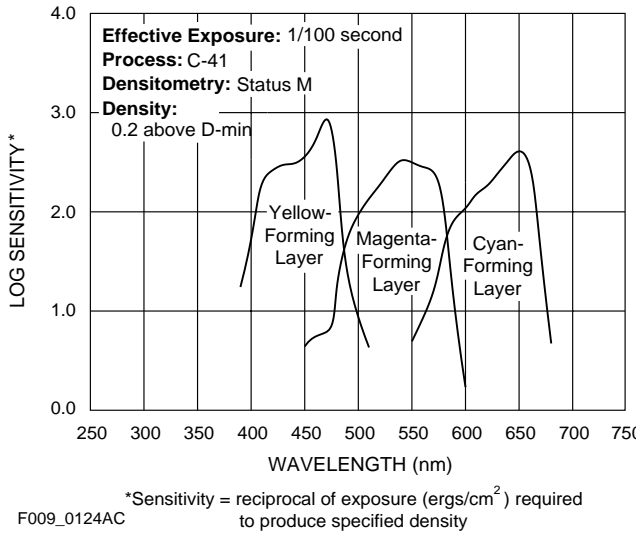
### Characteristic Curves / Push 1



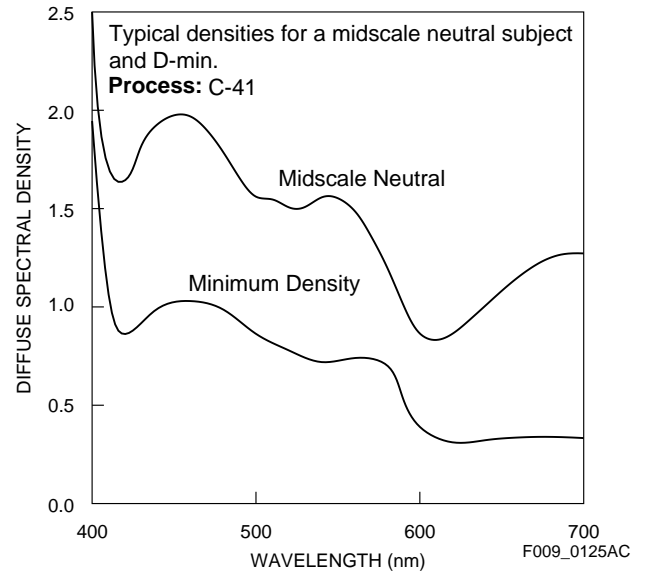
### Characteristic Curves / Push 2



### Spectral-Sensitivity Curves



### Spectral-Dye-Density Curves

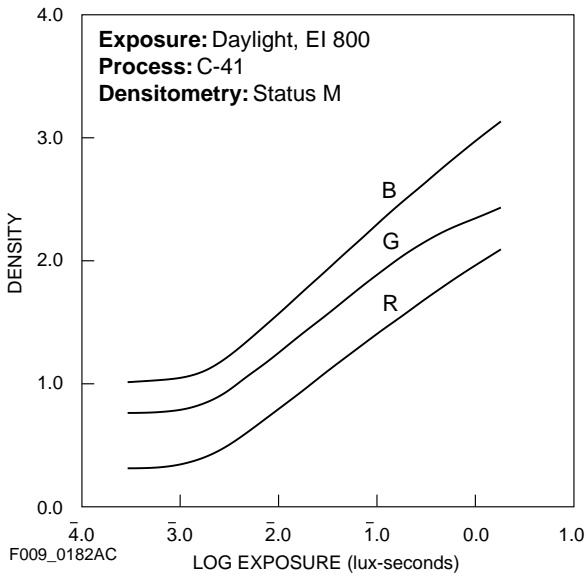


## KODAK PROFESSIONAL EKTAPRESS FILM PJ800

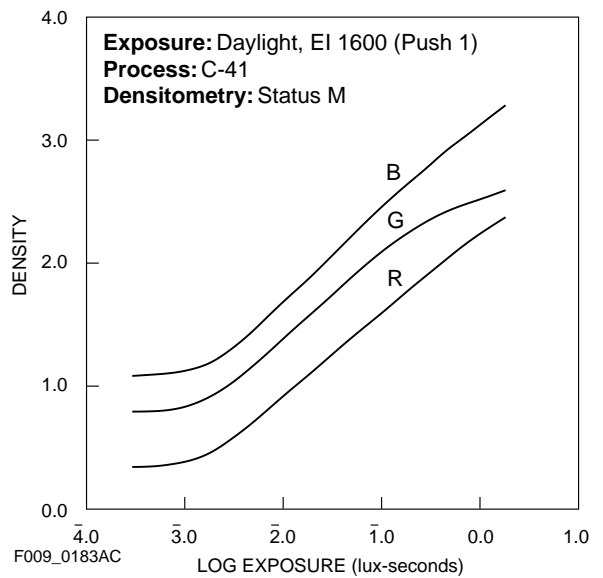
### Image-Structure Data

Sharpness:	High
Degree of Enlargement:	High

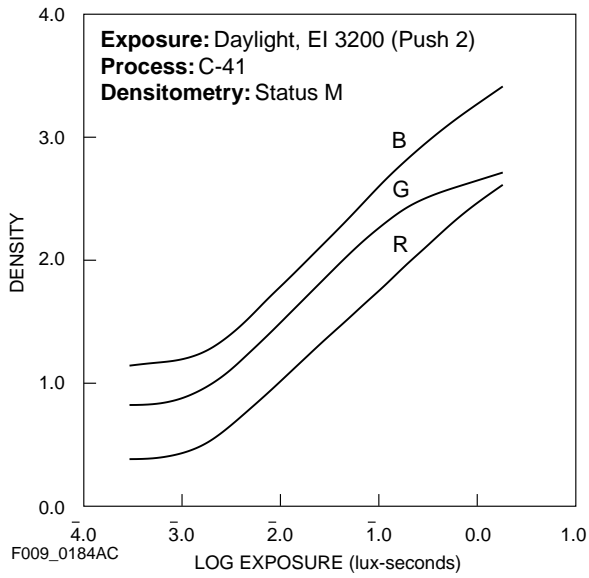
### Characteristic Curves



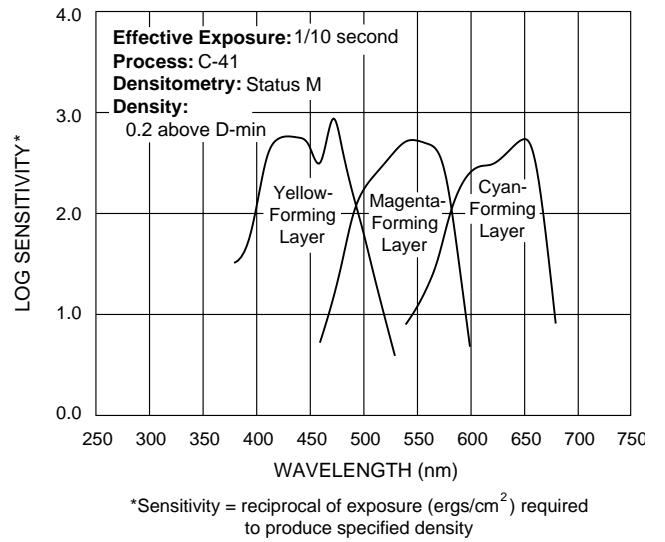
### Characteristic Curves / Push 1



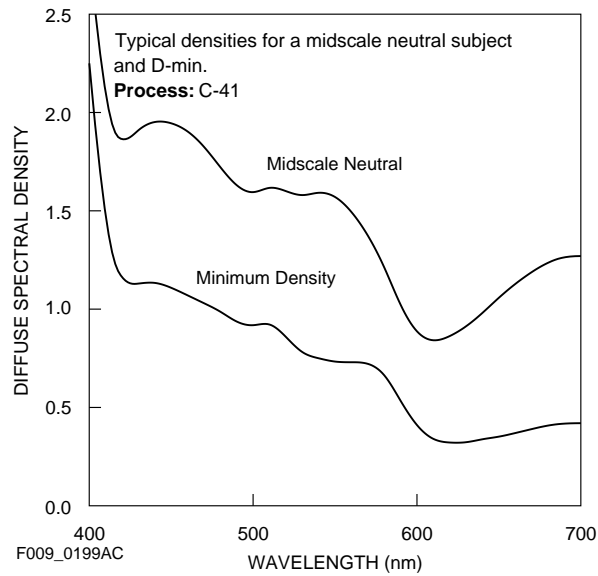
### Characteristic Curves / Push 2



### Spectral-Sensitivity Curves



### Spectral-Dye-Density Curves





## SIZES AVAILABLE

Sizes and catalog (CAT) numbers may differ from country to country. See your dealer who supplies KODAK PROFESSIONAL Products.

### KODAK PROFESSIONAL EKTAPRESS Film PJ100

Film Size	Code	Base	CAT No.
135-36 (Pro-Pack / 5 rolls)	PJ100	5-mil acetate	827 5984
135-36 (Pro-Pack 20 / 20 rolls)	PJ100	5-mil acetate	816 9146

### KODAK PROFESSIONAL EKTAPRESS Film PJ400

Film Size	Code	Base	CAT No.
135-36 (Pro-Pack / 5 rolls)	PJ400	5-mil acetate	182 2196
135-36 (Pro-Pack 20 / 20 rolls)	PJ400	5-mil acetate	168 2731

### KODAK PROFESSIONAL EKTAPRESS Film PJ800

Film Size	Code	Base	CAT No.
135-36 (Pro-Pack / 5 rolls)	PJ800	5-mil acetate	172 9920
135-36 (Pro-Pack 20 / 20 rolls)	PJ800	5-mil acetate	149 8294

# KODAK PROFESSIONAL EKTAPRESS Films

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## MORE INFORMATION

Kodak has many publications to assist you with information on Kodak products, equipment, and materials.

Additional information is available on the Kodak website and through the U.S.A./Canada faxback system.

The following publications are available from Kodak Customer Service, from dealers who sell Kodak products, or you can contact Kodak in your country for more information.

- E-24 *KODAK VERICOLOR Slide and Print Films*
- E-30 *Storage and Care of KODAK Photographic Materials—Before and After Processing*
- E-58 *Print Grain Index—An Assessment of Print Graininess from Color Negative Films*
- E-71 *Retouching Color Negatives*
- E-140 *KODAK PROFESSIONAL PORTRA III Paper*
- E-141 *KODAK PROFESSIONAL SUPRA III Paper*
- E-142 *KODAK PROFESSIONAL ULTRA III Paper*
- E-143 *KODAK Display and Print Materials for Process RA-4*
- G-22 *KODAK EKTAMAX RA Professional Paper*
- G-27 *KODAK PANALURE SELECT RC Paper*
- J-38 *Using KODAK FLEXICOLOR Chemicals in Sink-Line, Batch, and Rotary-Tube Processors*
- Z-131 *Using KODAK FLEXICOLOR Chemicals*

For the latest version of technical support publications for KODAK PROFESSIONAL Products, visit Kodak on-line at:  
<http://www.kodak.com/go/professional>

Many technical support publications for KODAK PROFESSIONAL Products can be sent to your fax machine from the Kodak Information Center. Call:  
U.S. 1-800-242-2424, Ext. 33 / Canada 1-800-295-5531  
—Available 24 hours a day, 7 days a week—

If you have questions about KODAK PROFESSIONAL Products, call Kodak.

In the U.S.A.:

1-800-242-2424, Ext. 19, Monday–Friday  
9 a.m.–7 p.m. (Eastern time)

In Canada:

1-800-465-6325, Monday–Friday  
8 a.m.–5 p.m. (Eastern time)

**Note:** The Kodak materials described in this publication for use with KODAK PROFESSIONAL EKTAPRESS Films are available from dealers who supply KODAK PROFESSIONAL Products. You can use other materials, but you may not obtain similar results.



Kodak Professional Division  
EASTMAN KODAK COMPANY

**Kodak Professional**