

# KODAK PROFESSIONAL PROFOTO 100 Colour Negative Film



## DESCRIPTION

KODAK PROFESSIONAL PROFOTO 100 Colour Negative Film is a medium speed (EI 100) film that features high colour saturation, accurate colour and pleasing skin-tone reproduction, and good underexposure latitude. It is intended for portrait and social applications, and can be stored at room temperature—even in hot, humid climates. Its printing characteristics are similar to those of KODAK GOLD Films to help simplify printing for photofinishers.

FEATURES	BENEFITS
<ul style="list-style-type: none"> <li>Outstanding flesh-tone reproduction, colour accuracy, and saturation</li> </ul>	<ul style="list-style-type: none"> <li>The film of choice for portrait and social photographers</li> </ul>
<ul style="list-style-type: none"> <li>Intended for room-temperature storage</li> </ul>	<ul style="list-style-type: none"> <li>No need for refrigerated storage</li> </ul>
<ul style="list-style-type: none"> <li>Excellent latent-image-keeping characteristics</li> </ul>	<ul style="list-style-type: none"> <li>Excellent consistency</li> <li>Excellent processing robustness</li> </ul>
<ul style="list-style-type: none"> <li>Printing characteristics similar to those of KODAK GOLD Films</li> </ul>	<ul style="list-style-type: none"> <li>Can be printed on the same channel as the family of KODAK GOLD Films</li> </ul>

## DARKROOM RECOMMENDATIONS

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

## STORAGE AND HANDLING

Load and unload your camera in subdued light.

Store unexposed film at room temperature. For best results, store film at 21°C (70°F) or lower, and process film as soon as possible after exposure.

Protect negatives from strong light, and store them in a cool, dry place. For more information about storing negatives, see KODAK Publication No. E-30, *Storage and Care of KODAK Photographic Materials—Before and After Processing*.

## EXPOSURE

### Exposure Compensation

Use the filter recommendations and exposure adjustments in the table below under uniform lighting.

Light Source	KODAK WRATTEN Gelatin Filter*	Exposure Adjustment
Daylight or Electronic Flash	None	None
Photolamp (3400 K)	No. 80B	+1⅓ stops
Tungsten (3200 K)	No. 80A	+2 stops

\* For best results without special printing.

### Daylight

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

Lighting Conditions	Shutter Speed (second)	Lens Opening
Bright or Hazy Sun on Light Sand or Snow	1/125	f/16
Bright or Hazy Sun (Distinct Shadows)	1/125	f/11*
Weak, Hazy Sun (Soft Shadows)	1/125	f/8
Cloudy Bright (No Shadows)	1/125	f/5.6
Heavy Overcast or Open Shade†	1/125	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 number in the following table 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 metres or feet.

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

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

\* BCPS = beam candlepower seconds

## Fluorescent and High-Intensity Discharge Lamps

Use the colour-compensating filters and exposure adjustments in the following tables as starting points to expose this film under fluorescent or high-intensity discharge lamps. For critical applications, make a series of test exposures under your actual conditions.

To avoid the brightness and colour variations that occur during a single alternating-current cycle, use exposure times of 1/60 second or longer with fluorescent lamps; with high-intensity discharge lamps, use exposure times of 1/125 second or longer.

Type of Fluorescent Lamp	KODAK Colour Compensating Filters	Exposure Adjustment
Daylight	40R	+ $\frac{2}{3}$ stop
White	20C + 30M	+1 stop
Warm White	40B	+1 stop
Warm White Deluxe	30B + 30C	+1 $\frac{1}{2}$ stops
Cool White	30M	+ $\frac{2}{3}$ stop
Cool White Deluxe	20C + 10M	+ $\frac{2}{3}$ stop

**Note:** When you don't know the type of fluorescent lamps, try a 10C + 20M filter combination and increase exposure by  $\frac{2}{3}$  stop; colour rendition will probably be less than optimum.

High-Intensity Discharge Lamp	KODAK Colour Compensating Filters	Exposure Adjustment
High-Pressure Sodium Vapor	70B + 50C	+3 stops
Metal Halide	10R + 20M	+ $\frac{2}{3}$ stop
Mercury Vapor with Phosphor	20R + 20M	+ $\frac{2}{3}$ stop
Mercury Vapor without Phosphor	80R	+1 $\frac{2}{3}$ stops

**Note:** Some primary colour filters were used in the previous tables to reduce the number of filters and/or to keep the exposure adjustment to a minimum. Red filters were substituted for equivalent filtration in magenta and yellow. Blue filters were substituted for equivalent filtration in cyan and magenta.

## Adjustments for Long and Short Exposures

No filter corrections or exposure compensation is required for exposures from 1/10,000 second to 10 seconds.

## PROCESSING

Process this film in KODAK FLEXICOLOR Chemicals for Process C-41.

## JUDGING NEGATIVE EXPOSURE

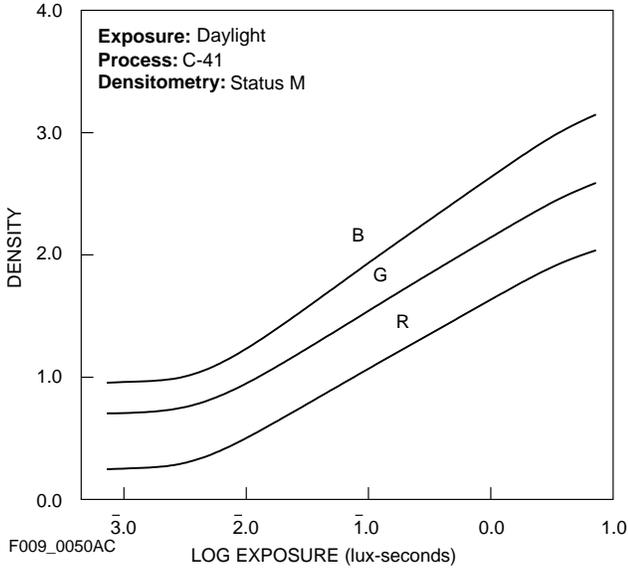
You can check the exposure level with a suitable electronic densitometer equipped with a filter such as a KODAK WRATTEN Gelatin Filter No. 92 or the red filter for Status M densitometry. Depending on the subject and the light source used for exposure, a normally exposed and processed colour negative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

Area Measured	Density Reading
The KODAK Gray Card (gray side) receiving the same illumination as the subject	1.03 to 1.23
The lightest step (darkest in negative) of a KODAK Paper Gray Scale receiving the same illumination as the subject	1.43 to 1.63
The highest diffuse density on a normally lighted forehead	
— light complexion	1.33 to 1.63
— dark complexion	1.08 to 1.48

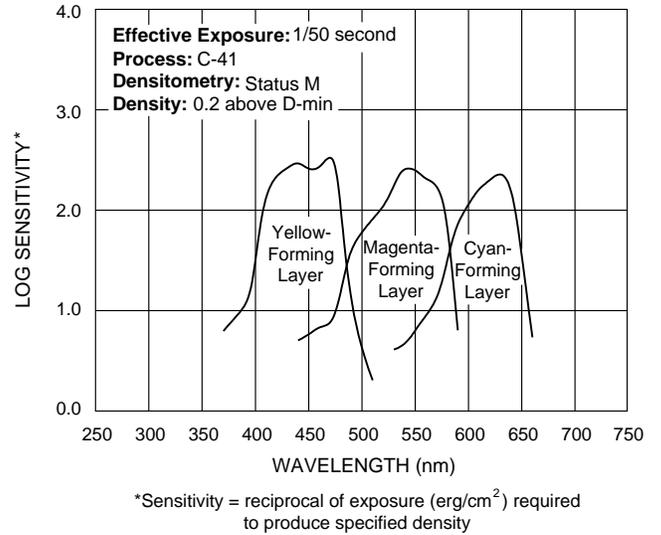
Because of the extreme range in skin colour, use these red density values for a normally lighted forehead only as a guide. For best results, use a KODAK Gray Card (gray side).

# CURVES

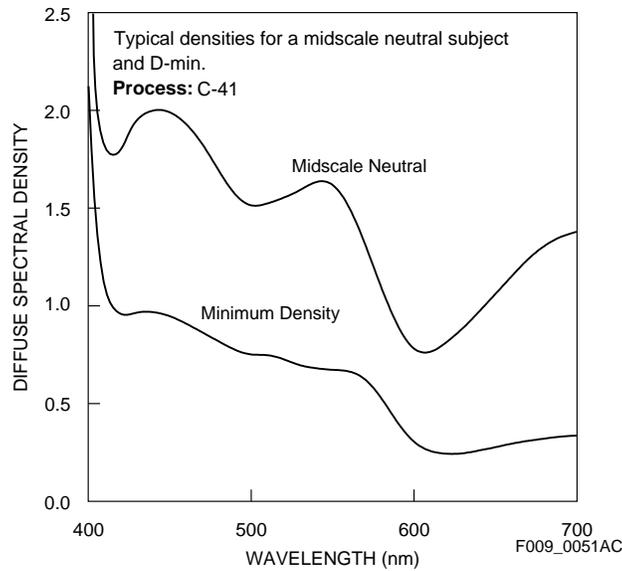
## Characteristic Curves



## 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.

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## RETOUCHING

You can retouch negatives on this film on the emulsion side. For information on retouching equipment, supplies, and techniques, see KODAK Publication No. E-71, *Retouching Color Negatives*.

## PRINTING NEGATIVES

You can make colour prints from negatives by enlarging them on KODAK EKTACOLOR Papers; photofinishers can print negatives on this film with printer settings that are similar to those they use to print KODAK GOLD Film negatives onto KODAK EKTACOLOR Edge 5 and ROYAL V Papers.

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

Make black-and-white prints on KODAK PANALURE SELECT Papers for conventional black-and-white printing, or KODAK EKTAMAX RA Professional Papers for Process RA-4.

## 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 viewers.
- 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 35.6 cm (14 inches), the typical viewing distance for a 10.2 x 15.2 cm (4 x 6-inch) print.
- Print Grain Index numbers may not represent graininess observed from more specular printing illuminants, such as condenser enlargers.

**Negative Size: 24 x 36 mm (Size 135)**

<b>Print Size</b>	10.2 x 15.2 cm (4 x 6 in.)	20.3 x 25.4 cm (8 x 10 in.)	40.6 x 50.8 cm (16 x 20 in.)
<b>Magnification</b>	4.4X	8.8X	17.8X
<b>Print Grain Index</b>	43	65	94



Kodak Professional Division  
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