

# KODAK PROFESSIONAL ELITE

## Chrome 200 Film



This medium-speed, daylight-balanced 200-speed color reversal film is designed for KODAK Chemicals, Process E-6.

The film offers moderate contrast, along with excellent color and image structure similar to 100-speed daylight slide films. It is ideal for general outdoor or daylight picture-taking under moderate- to low-light conditions.

ELITE Chrome 200 Film also features KODAK T-GRAIN Emulsion technology for extremely fine grain and very high sharpness, plus improvements in reciprocity and manufacturing consistency.

The film is designed for exposure with daylight or electronic flash. You can also expose it with tungsten illumination (3200 K) or photolamps (3400 K) using filters.

Use ELITE Chrome 200 Film to produce color transparencies (slides) for projection. You can make duplicate transparencies by direct printing. To make color prints, you can print transparencies onto color reversal paper. Or make internegatives for printing onto color negative paper. You can also scan transparencies for digital printing and for Photo CD applications.

FEATURES	BENEFITS
<b>Color Saturation:</b>	
<ul style="list-style-type: none"> <li>Enhanced colors while maintaining natural-looking skin tones</li> <li>Contrast of an EI 100-speed color reversal film (lower contrast than other high-speed color reversal films)</li> </ul>	<ul style="list-style-type: none"> <li>Pleasing colors</li> <li>Beautiful skin-tone reproduction</li> <li>Improved reproduction of highlight and shadow details</li> <li>More tone gradation for more natural-appearing images</li> </ul>
<b>Image Structure Technology:</b>	
<ul style="list-style-type: none"> <li>KODAK T-GRAIN® Emulsions in all color records</li> </ul>	<ul style="list-style-type: none"> <li>Finest grain structure of any daylight, high-speed color reversal film on the market (&gt;100 speed)</li> <li>High sharpness</li> </ul>
<b>Advanced Color Technology:</b>	
<ul style="list-style-type: none"> <li>Solid-Particle Filter Dye for wavelength-selective, blue- and green-light protection</li> <li>Patented Stable Super Active Scavengers (SSAS)</li> <li>New spectral sensitizing dyes</li> </ul>	<ul style="list-style-type: none"> <li>Produces purer colors and enhanced sharpness</li> <li>Provides broader range of blue-light capture</li> </ul>
<b>Exposure Reliability:</b>	
<ul style="list-style-type: none"> <li>Superb reciprocity</li> <li>Improved manufacturing process</li> </ul>	<ul style="list-style-type: none"> <li>Consistent results in exposures from 10 seconds to 1/10,000 second with no exposure or filter corrections</li> <li>Excellent roll-to-roll consistency</li> </ul>
<b>Process Reliability:</b>	
<ul style="list-style-type: none"> <li>Designed for Process E-6 chemicals</li> </ul>	<ul style="list-style-type: none"> <li>Process with other films in Process E-6 without equipment or process modifications</li> </ul>

## MANUFACTURING UNIFORMITY

Similar to ELITE Chrome 100 and 400 Films, the 200 film takes full advantage of Kodak's new state-of-the-art manufacturing facility in Rochester, New York. The result is a film with excellent roll-to-roll consistency and accurate 200 speed.

## STORAGE AND HANDLING

Load and unload film in subdued light.

Store unexposed film in a refrigerator at 55°F (13°C) or lower in the original sealed package. To avoid moisture condensation on film that has been refrigerated, allow the film to warm up to room temperature before opening the package. Process film as soon as possible after exposure.

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

## SIZES AVAILABLE

Sizes and catalog numbers may differ from country to country. See your dealer who supplies Kodak products.

Rolls	Code	Base
135-24	ED	5-mil acetate
135-24 (carded)		
135-36		

## DARKROOM RECOMMENDATIONS

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

## EXPOSURE

### Exposure Index Numbers

Use the exposure index numbers below with cameras or light meters marked for ISO or ASA speeds or exposure indexes. Do not change the film-speed setting when metering through a filter. Metering through filters may affect meter accuracy; see your meter or camera manual for specific information. For critical work, make a series of test exposures.

Light Source	KODAK WRATTEN Gelatin Filter	Exposure Index
Daylight or Electronic Flash	None	200
Tungsten (3200 K)	No. 80A	50

## 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)	Lens Opening
Bright/Hazy Sun on Sand or Snow	1/250	<i>f</i> /22
Bright/Hazy Sun, Distinct Shadows	1/250	<i>f</i> /16*
Weak, Hazy Sun, Soft Shadows	1/250	<i>f</i> /11
Cloudy Bright, No Shadows	1/250	<i>f</i> /8
Heavy Overcast or Open Shade†	1/250	<i>f</i> /5.6

\* Use *f*/8 for backlit close-up subjects.

† Subjects shaded from sun but lit by large area of clear sky.

## Electronic Flash

Use the appropriate guide number in the following table as a starting point for your equipment. First 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 transparencies are consistently too thin (overexposed), use a higher guide number; if they are too dense (underexposed), use a lower number.

Unit Output (BCPS*)	Guide Number	
	Distance in Feet	Distance in Metres
350	60	18
500	70	21
700	85	26
1000	100	30
1400	120	36
2000	140	42
2800	170	50
4000	200	60
5600	240	70
8000	280	85

\* BCPS=beam candlepower seconds.

## Fluorescent and High-Intensity Discharge Lamps

Use the color-compensating filters and exposure adjustments below 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 color 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 1/125 second or longer.

Type of Fluorescent Lamp	KODAK Color Compensating Filters	Exposure Adjustment
Daylight	50R	+1 stop
White	40M	+ $\frac{2}{3}$ stop
Warm White	20C + 40M	+1 stop
Warm White Deluxe	30B + 30C	+1 $\frac{1}{3}$ stops
Cool White	40M + 10Y	+1 stop
Cool White Deluxe	20C + 10M	+ $\frac{2}{3}$ stop

**Note:** When you do not know the type of fluorescent lamps, try a 30M filter and increase exposure by  $\frac{2}{3}$  stop; color rendition will probably be less than optimum.

High-Intensity Discharge Lamp	KODAK Color Compensating Filters	Exposure Adjustment
General Electric Lucalox*	80B + 20C	+2 $\frac{1}{3}$ stops
General Electric Multi-Vapor	20R + 20M	+ $\frac{2}{3}$ stop
Deluxe White Mercury	30R + 30M	+1 $\frac{1}{3}$ stops
Clear Mercury	70R	+1 $\frac{1}{3}$ stops

\* This is a high-pressure sodium-vapor lamp. The information in the table may not apply to other manufacturers' sodium-vapor lamps because of differences in spectral characteristics.

**Note:** Consult the manufacturer of high-intensity lamps for ozone ventilation requirements and safety information on ultraviolet radiation.

Some primary color filters were used in the previous tables to reduce the number of filters and 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 correction or exposure compensation is required for exposures from 1/10,000 to 10 seconds.

**Note:** This information applies only when exposing the film to daylight. The data are based on average emulsions rounded to the nearest 1/2 stop and assume normal, recommended processing. Use the data only as a guide. For critical applications, make tests under your conditions.

## PROCESSING

Process ELITE Chrome 200 Film in KODAK Chemicals, Process E-6.

## RETOUCHING TRANSPARENCIES

Use KODAK E-6 Transparency Retouching Dyes. You can retouch only the emulsion side of this film. For information on retouching equipment, supplies, and techniques, see KODAK Publication No. E-68, *Retouching Transparencies on KODAK EKTACHROME Film*.

## PRINTING TRANSPARENCIES

You can make color prints or enlargements photographically by making an internegative and printing on Kodak color negative paper.

You can also make prints and enlargements with a KODAK Picture Maker. This self-serve picture kiosk makes prints from wallet to 8 x 10-inches, and allows you to remove red-eye, add text and borders, and make calendars. See your photo dealer for availability in your area.

## SCANNING TRANSPARENCIES

You can easily scan ELITE Chrome 200 Film with a variety of linear-array-CCD, area-array-CCD, and PMT film scanners. You can scan slides on desk-top 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.

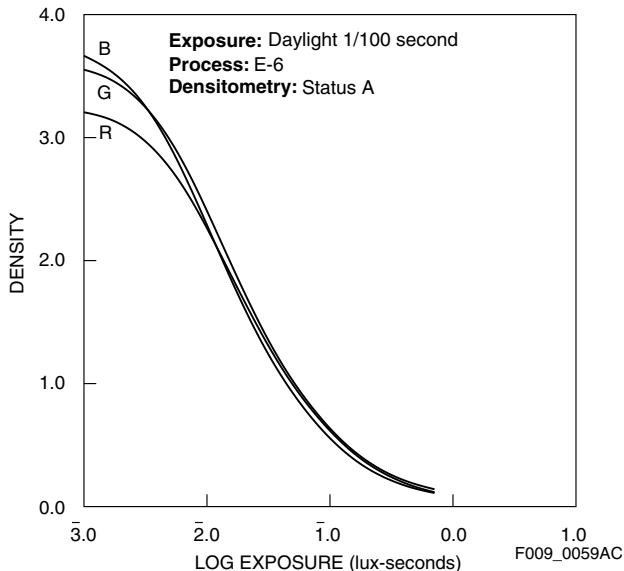
The generic "color slide film" setting available with scanner software is only a starting point. You can adjust the final color balance and the scene-dependent contrast and brightness of an image by using the scanner's controls during pre-scan, or by using an image-manipulation software program or workstation after acquisition. Some scanners allow you to use "plug-in" programs to customize scanner setups.

## IMAGE STRUCTURE

### Diffuse rms Granularity\* 12

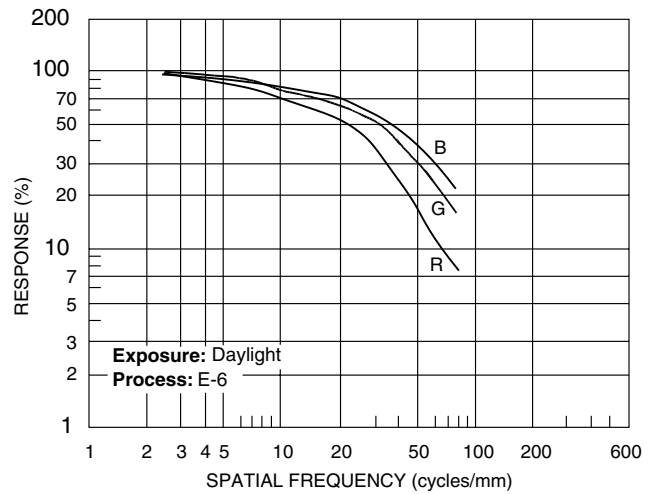
\*Read at a gross diffuse visual density of 1.0, using a 48-micrometre aperture, 12X magnification.

### Characteristic Curves



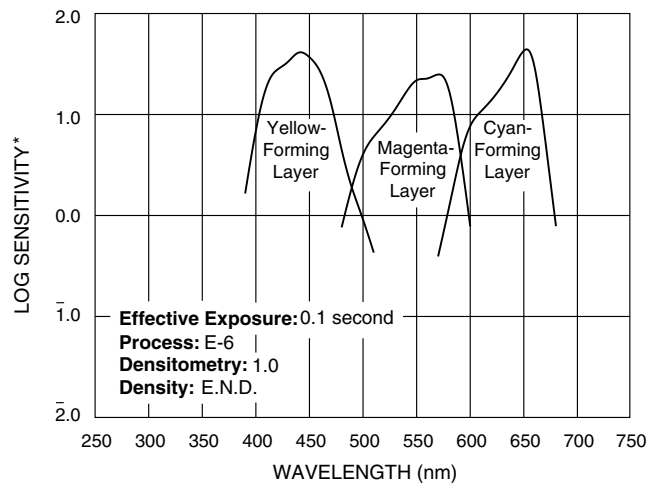
F009\_0059AC

### Modulation-Transfer Curves



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### Spectral-Sensitivity Curves

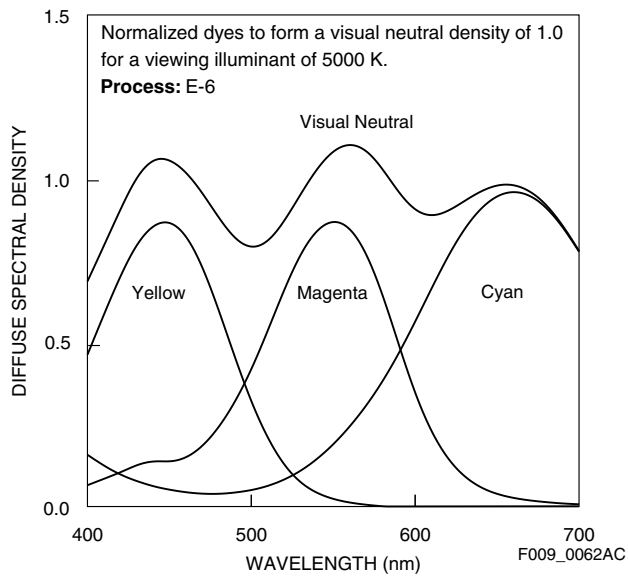


\*Sensitivity = reciprocal of exposure (erg/cm<sup>2</sup>) required to produce specified density

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**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.

## Spectral-Dye-Density Curves



## MORE INFORMATION

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

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

- E-30 *Storage and Care of KODAK Photographic Materials—Before and After Processing*
- E-68 *Retouching Transparencies on KODAK EKTACHROME Film*
- E-126E *KODAK PROFESSIONAL ELITE Chrome Extra Color 100 Film*
- E-149E *KODAK PROFESSIONAL ELITE Chrome 400 Film*
- E-7014E *KODAK PROFESSIONAL ELITE Chrome 100 Film*
- Z-119 *Using KODAK Chemicals, Process E-6*

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

If you have questions about KODAK Products, call Kodak.

In the U.S.A.:

1-800-242-2424, 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 ELITE Chrome 200 Film are available from dealers who supply Kodak products. You can use other materials, but you may not obtain similar results.

# KODAK PROFESSIONAL ELITE Chrome 200 Film

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## AT-A-GLANCE FILM SELECTOR

KODAK PROFESSIONAL Film	Film Speed (Exposure Index)	Exposure	Lighting Conditions	Grain	Process
For Color Slides					
ELITE Chrome 100	EI 100 Medium	Daylight	Bright, hazy sun Enlargements	Extremely fine	E-6
ELITE Chrome Extra Color 100	EI 100	Daylight or Electronic Flash	Outdoor or indoor with flaSh	Extremely fine	E-6
ELITE Chrome 200	EI 200 Medium	Daylight	Multi-purpose use	Extremely fine	E-6
ELITE Chrome 400	EI 400 Medium	Daylight	Low light Fast Action	Fine	E-6

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