



Elite CHROME 400

FILM

DESCRIPTION

This high-speed color slide film is ideal for action photography, for using handheld telephoto lenses, or for situations that require small apertures to increase depth of field. It is also excellent for low-light conditions.

ELITE Chrome 400 Film incorporates several Kodak-patented technologies which produce slides of superior color, clarity, and consistency. The new film's color is balance optimized to match the overall high-quality appearance of the other films in the ELITE Chrome Film family.

ELITE Chrome 400 Film is intended for exposure with daylight or electronic flash. You can also expose it with tungsten (3200 K) illumination with conversion filters.

Use this film to produce color slides for projection. You can have color prints, enlargements, duplicate slides, internegatives, and photo CDs made from your original slides.

ELITE Chrome 400 Film is a member of the "Select Series" of Kodak films. The Select Series offers serious snapshooters and photo enthusiasts the widest selection of high-performance films. Choose from KODACHROME or KODAK ELITE Chrome Films for slides, or KODAK ROYAL GOLD Films for prints.

FEATURES

BENEFITS

Color Saturation

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| <ul style="list-style-type: none"> • Enhanced color saturation | <ul style="list-style-type: none"> • Produces rich, vibrant colors even under dim daylight conditions |
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Image Structure Technology

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| <ul style="list-style-type: none"> • Advanced KODAK T-GRAIN® Emulsion • Triple-Coat Emulsion Technology in magenta layer | <ul style="list-style-type: none"> • Fine grain • High sharpness |
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Advanced Color Technology

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| <ul style="list-style-type: none"> • Solid-Particle Filter Dye for wavelength-selective, blue- and green-light protection • Patented Stable Super Active Scavengers (SSAS) | <ul style="list-style-type: none"> • Produces purer colors and enhanced sharpness |
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Exposure Reliability

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| <ul style="list-style-type: none"> • High speed • Improved manufacturing process | <ul style="list-style-type: none"> • Faster shutter speeds to stop action • Smaller apertures for greater depth of field • Extends usable range of electronic flash • Excellent roll-to-roll consistency |
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Process Reliability

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| <ul style="list-style-type: none"> • Designed for Process E-6 chemicals | <ul style="list-style-type: none"> • Process with other films in Process E-6 without equipment or process modifications |
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STORAGE AND HANDLING

Load and unload film in subdued light.

Store unexposed film at 21°C (70°F) or lower in the *original sealed package*. Always store film in a cool, dry place. Process film as soon as possible after exposure.

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

SIZES AVAILABLE

Film Size	Code	Base	CAT No.
135-24	EL	5-mil acetate	186 8231
135-24 (carded)			145 0410
135-36			160 1871

DARKROOM RECOMMENDATIONS

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

EXPOSURE

General

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

Light Source	KODAKWRATTEN Gelatin Filter	Exposure Index
Daylight or Electronic Flash	None	400
Tungsten (3200 K)	No. 80A	100

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 or Hazy Sun on Light Sand or Snow	1/500	f/22
Bright or Hazy Sun (Distinct Shadows)	1/500	f/16*
Weak, Hazy Sun (Soft Shadows)	1/500	f/11
Cloudy Bright (No shadows)	1/500	f/8
Heavy Overcast or Open Shade†	1/500	f/5.6

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

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

Electronic Flash

Use the appropriate 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 feet or metres. To determine the lens opening, divide the guide number by the flash-to-subject distance. If slides 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	
	For Distances in Feet	For Distances in Metres
350	85	26
500	100	30
700	120	36
1000	140	42
1400	170	50
2000	200	60
2800	240	70
4000	280	85
5600	340	105
8000	400	120

* BCPS=beam candlepower seconds.

Fluorescent and High-Intensity Discharge Lamps

Use the color-compensating filters and exposure adjustments in the tables 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 exposure times of 1/125 second or longer.

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

Note: When you don't know the type of fluorescent lamps, try a 30M filter and increase exposure by 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	+2 $\frac{2}{3}$ 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' high-pressure 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

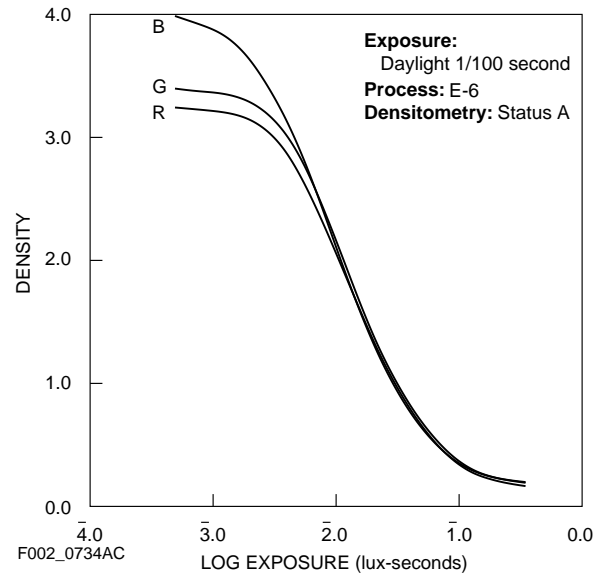
No filter correction or exposure compensation is required for exposures from 1/10,000 to 1/10 second. At 1 second, use a CC05R filter and increase exposure by $\frac{1}{3}$ or $\frac{1}{2}$ stop. At 10 seconds, use a CC10R filter and increase exposure by $\frac{1}{2}$ stop.

Note: This information applies only when the film is exposed to daylight. The data are based on average emulsions rounded to the nearest $\frac{1}{3}$ stop and assume normal, recommended processing. Use the data only as a guide. For critical applications, make tests under your conditions.

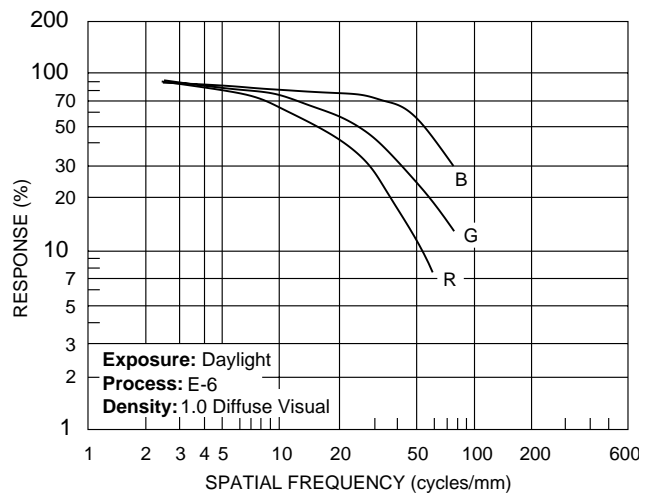
IMAGE STRUCTURE

Diffuse rms Granularity* 19

Characteristic Curves

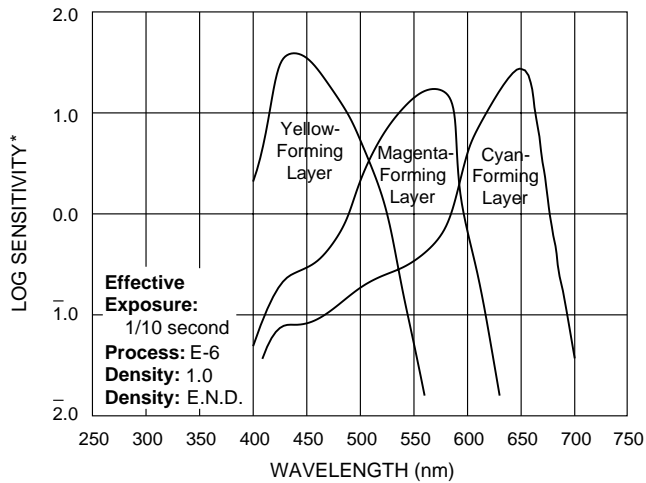


Modulation-Transfer Curves



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

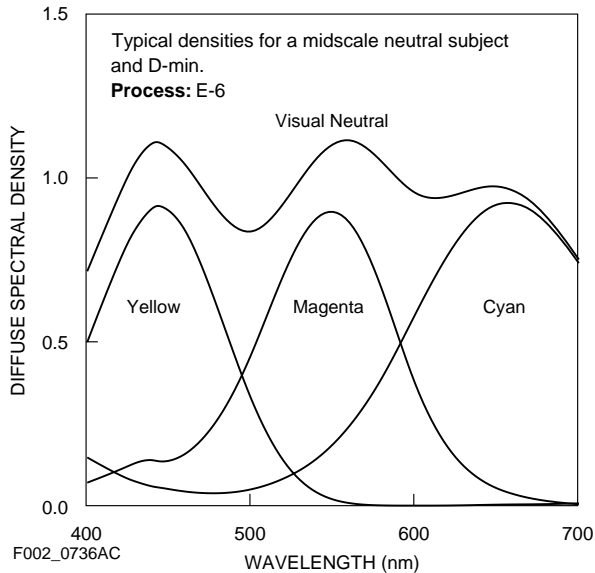
Spectral-Sensitivity Curves



*Sensitivity = reciprocal of exposure (erg/cm²) required to produce specified density

F002_0735AC

Spectral-Dye-Density Curves



F002_0736AC

PROCESSING

Process ELITE Chrome 400 Film in KODAK Chemicals, Process E-6.

PRINTING SLIDES

You can make color prints or enlargements photographically by printing color slides directly onto KODAK EKTACHROME RADIANCE III Papers. Or you can make internegatives and print them on KODAK EKTACOLOR Papers.

Prints and enlargements can be made digitally from color slides using apparatus* that scans, enhances, manipulates, and prints images. See your photo dealer for services available in your area.

SCANNING FOR PHOTO CD APPLICATIONS

Use the Universal E-6 Film Term to scan all KODAK ELITE Chrome Films for KODAK PCD Imaging Workstation applications.

For output to a photo CD player: Using the Universal E-6 Film Term should result in an image that closely matches your original in density, tone scale, and overall color balance when viewed on a player.

For output devices other than photo CD players: The YCC data that results when using the Universal E-6 Film Term is capable of producing a high-quality duplicate of your original in terms of density, tone scale, and color reproduction. Final quality of your reproduced image depends on the capabilities of your output device, the viewing environment, and the rendering path used.

* Such as KODAK Creation Station, KODAK Digital Enhancement Station, and KODAK Digital Print Station.

MORE INFORMATION

Kodak has many publications to assist you with information on Kodak products, equipment, and methods. The following publications are available directly from Kodak through the order form in KODAK Publication No. L-1, *KODAK Index to Photographic Information*. To obtain a copy of L-1, send your request with \$1 to Eastman Kodak Company, Department 412-L, Rochester, New York 14650-0532.

- E-30 *Storage and Care of KODAK Photographic Materials—Before and After Processing*
- E-31 *Reciprocity and Special Filter Data for KODAK Films*
- E-134 *KODAK ELITE Chrome 100 Film*
- E-154 *KODAK ELITE Chrome 160T (Tungsten) Film*
- E-148 *KODAK ELITE Chrome 200 Film*

Kodak Information Center's Faxback System

—Available 24 hours a day, 7 days a week—

Many technical support publications for Kodak products can be sent to your **fax** machine from the Kodak Information Center. Call:

U.S. 1-800-242-2424, Ext. 33

If you have questions about Kodak products, call Kodak.

In the U.S.A.:

*1-800-242-2424, Ext. 25, Monday–Friday
9 a.m.–7 p.m. (Eastern time)*

In Canada:

*1-800-465-6325, Monday–Friday
8:30 a.m.–5 p.m. (Eastern time)*

*Or contact Kodak on-line at:
<http://www.kodak.com>*

Note: The Kodak materials described in this publication for use with KODAK ELITE Chrome 400 Film are available from dealers who supply Kodak products. You can use other materials, but you may not obtain similar results.

KODAK ELITE Chrome 400 Film

AT-A-GLANCE FILM SELECTOR

KODAK Select Series Film	Film Speed	Exposure	Lighting Conditions	Grain	Process
<i>For Color Slides</i>					
ELITE Chrome 100	EI 100	Daylight or Electronic Flash	Bright or hazy sun Enlargements	Extremely fine	E-6
ELITE Chrome 160T (Tungsten)	EI 160	Tungsten	Stadium Theater Indoors	Very fine	E-6
ELITE Chrome 200	EI 200	Daylight or Electronic Flash	Multi-purpose use	Extremely fine	E-6
ELITE Chrome 400	EI 400	Daylight or Electronic Flash	Low light Fast action	Fine	E-6

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