KODAK EKTACHROME 64 Professional Film

This color transparency film has become the standard of the industry for use in the studio or under controlled daylight conditions. Its rich, natural color and soft highlight contrast are ideal for food, fashion, and product advertising.

This film features very fine grain and very high sharpness. It is designed for exposure with daylight or electronic flash at times from 1/10,000 to 1/10 second with no filter or exposure adjustment. You can use exposure times up to 1 second with an exposure increase and a color compensating filter. You can also expose this film with photolamps (3400 K) or tungsten (3200 K) illumination with conversion filters.

Use this film to produce color transparencies for viewing with 5000 K illumination. You can also use the transparencies for printing by photomechanical methods, by photographic methods of direct duplication and direct reversal printing.

FEATURES	BENEFITS
• Excellent flesh-to-neutral color balance	• Accurately records neutral colors while maintaining pleasing skin tones
• Excellent sharpness and very fine grain	• Exceptional rendition of detail; ideal for commercial photography
• Rich, natural color soft highlight contrast	• Excellent reproduction for advertising and catalog illustrations

SIZES AVAILABLE

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

Rolls	Film Code	Acetate Base	CAT No.
135-36	EPR	5-mil (0.13 mm)	872 3504
120	EPR	3.9-mil (0.10 mm)	160 3422
120 (pro-pack of 5 rolls)	EPR	3.9-mil (0.10 mm)	191 4720
220 (pro-pack of 5 rolls)	EPR	3.9-mil (0.10 mm)	128 2292

Long Rolls	Film Code	Spec	Acetate Base	CAT No.
35 mm x 100-ft, perf both edges	EPR	404	5-mil (0.13 mm)	160 2952

Sheets	Film Code	Size (Inches)	ESTAR Thick Base*	CAT No.
10 50	[redacted]	4 x 5	7 mil (0.18 mm)	122 5283 120 8222
10 50		8 x 10		122 5341 120 8248

*Base will change from 8.2 acetate to 7-mil (0.18 mm) ESTAR Thick Base during 2001.

STORAGE AND HANDLING

Load and unload film in subdued light.

Store unexposed film at 13°C (55°F) 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 processed film from strong light, and store it 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*.

DARKROOM RECOMMENDATIONS

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

EXPOSURE

Exposure Index Numbers

Use the Exposure Index (EI) numbers below with cameras or light meters marked for ISO or ASA speed or exposure indexes. Do not change the film-speed setting when metering through a filter. Metering though 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	64
Photolamp (3400 K)	No. 80B	20
Tungsten (3200 K)	No. 80A	16

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	1/125	*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 at 1/125 second for back-lit close-up subjects.
†Subject shaded from the sun but lit by a large area of clear sky.

When you expose this film on overcast days or in open shade, the color balance may appear cool (bluish). To correct a slight shift in color, use a skylight filter such as a KODAK WRATTEN Gelatin Filter No. 1A with no exposure increase. To correct a more significant shift, use a yellowish conversion filter such as a KODAK WRATTEN Gelatin Filter No. 81A and increase exposure by 1/3 stop.

Electronic Flash

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.

Unit Output (BCPS)*	Guide Number	
	Distance in Feet	Distance in Metres
350	32	10
500	40	12
700	45	14
1000	55	17
1400	65	20
2000	80	24
2800	95	29
4000	110	33
5600	130	40
8000	160	50

*BCPS = beam candlepower seconds

Multiple Exposures with Electronic Flash

To compensate for the effects of multiple consecutive exposures (multipops), use the following filter corrections and exposure adjustments as starting points.

Number of Flashes	KODAK Color Compensating Filter	Exposure Adjustment
1	None	None
2	None	None
4	CC02M	+1/3 stop
8	CC05M	+1/2 stop
16	CC05M	+2/3 stop

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. Vary the recommended filtration by at least ±CC10, and increase or decrease exposure accordingly.

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.

Fluorescent Lamps	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
Unknown Fluorescent*	CC30M	+2/3 stop

*When the type of fluorescent lamp is unknown, try this filter and exposure adjustment; color rendition may be less than optimum.

High-Intensity Discharge Lamps	KODAK Color Compensating Filters	Exposure Adjustment
General Electric Lucalox *	80B + 20C	+2 1/3 stops
General Electric Multi-Vapor	20R + 20M	+2/3 stop
Deluxe White Mercury	30R + 30M	+1 1/3 stops
Clear Mercury	70R	+1 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 due to 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 exposure times from 1/10,000 to 1/10 second. At 1-second exposure, use a CC05R filter and increase exposure by 1/3 stop. We do not recommend using exposure times longer than 1 second.

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

PROCESSING

Process KODAK EKTACHROME 64 Professional Film in Process E-6 chemicals.

For consistent processing of this and all other EKTACHROME Films, use a lab that is a member of the KODAK Q-LAB Process Monitoring Service.

RETOUCHING

Use KODAK E-6 Transparency Retouching Dyes. You can chemically retouch sheet and 120/220 formats of this film on both the base and the emulsion side. Retouch only the emulsion side on the 135 size. For information on retouching equipment, supplies, and techniques, see Kodak Publication No. E-68, *Retouching Transparencies on KODAK EKTACHROME Film.*

PRINTING TRANSPARENCIES

You can reproduce images made on EKTACHROME 64 Professional Film by using a variety of Kodak materials.

Duplicate Color Transparencies

For direct printing, use—

KODAK PROFESSIONAL EKTACHROME Duplicating Film EDUPE

Or make internegatives on KODAK Commercial Internegative Film, and print them on—

KODAK PROFESSIONAL ENDURA Transparency Optical Display Material

KODAK PROFESSIONAL ENDURA Clear Optical Display Material

Color Prints

For direct printing, use—

KODAK EKTACHROME RADIANCE III Papers

KODAK EKTACHROME RADIANCE III SELECT Material

Or make internegatives on KODAK Commercial Internegative Film, and print them on—

KODAK PROFESSIONAL PORTRA ENDURA Paper

KODAK PROFESSIONAL SUPRA ENDURA Paper

KODAK PROFESSIONAL ULTRA ENDURA Paper

KODAK PROFESSIONAL DURAFLEX® Plus Digital Display Material

KODAK PROFESSIONAL ENDURA Metallic Paper

Digital Files

You can scan your image to a file and print digitally to—

KODAK PROFESSIONAL ENDURA Transparency Digital Display Material

KODAK PROFESSIONAL ENDURA Clear Digital Display Material

KODAK PROFESSIONAL DURAFLEX® Plus Digital Display Material

KODAK PROFESSIONAL ENDURA Metallic Paper

KODAK PROFESSIONAL Day/Night Digital Display Material

SCANNING TRANSPARENCIES

For Graphic Arts Applications

The KODAK EKTACHROME Film family is characterized by sets of image dyes that perform similarly when scanned. The scanner operator can set up one basic tone scale and color-correction channel for all EKTACHROME Films, and then optimize the tone scale and gray balance for the requirements of individual images.

Use the KODAK Color Input Target / Q-60E1 (4 x 5–inch transparency) or Q-60E3 (35 mm slide) to establish the setup for KODAK EKTACHROME Films on all scanners. These targets are manufactured to ANSI standards and represent the dye sets of all EKTACHROME Films.

For Photo CD Applications

Use the Universal E-6 Film Term to scan all KODAK EKTACHROME Films for Photo CD 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.

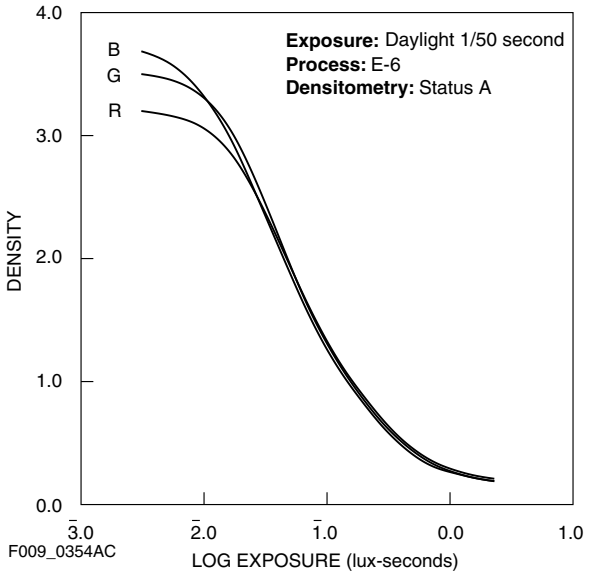
For Output to Devices Other than Photo CD Players: The YCC data that results when using the Universal E-6 Film Term is capable of producing a high-quality duplicate of your original tranparency in terms of density, tone scale, and color reproduction. Final quality of your reproduced image depends on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

CURVES

Diffuse rms Granularity* 11 (very fine)

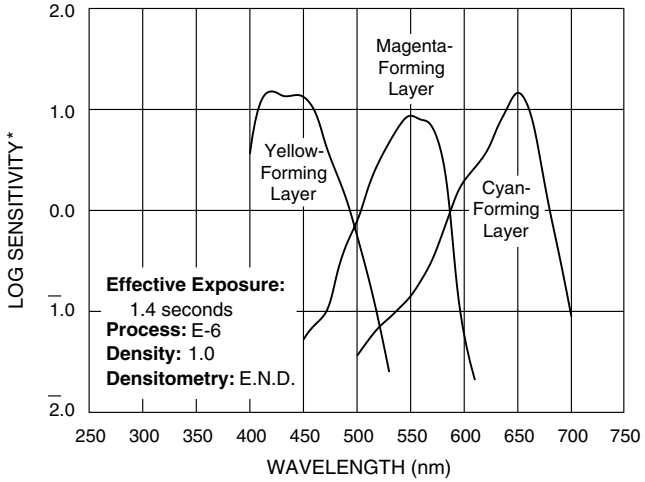
*Read on a gross diffuse visual density of 1.0, using a 48-micrometre aperture, 12X magnification.

Characteristic Curves



F009_0354AC

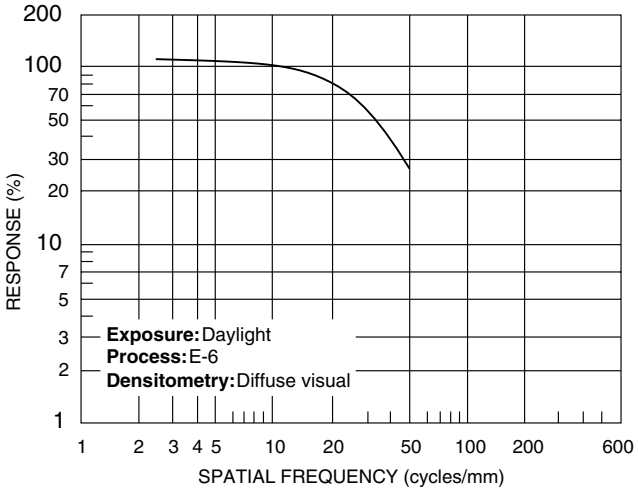
Spectral-Sensitivity Curves



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

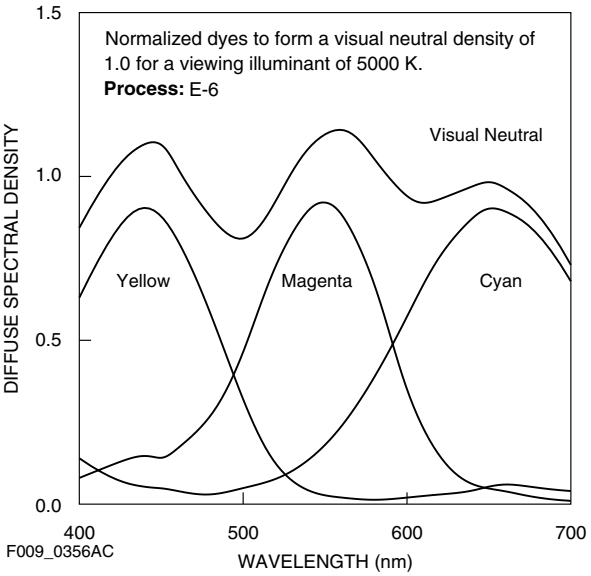
F009_0355AC

Modulation-Transfer Curves



F009_0353AC

Spectral-Dye-Density Curves



F009_0356AC

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.

MORE INFORMATION

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

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

E-27	*KODAK EKTACHROME 100 Professional Film*
E-28	*KODAK PROFESSIONAL EKTACHROME Film E200*
E-30	*Storage and Care of KODAK Photographic Materials—Before and After Processing*
E-38	*KODAK EKTACHROME Duplicating Films*
E-68	*Retouching Transparencies on KODAK EKTACHROME Film*
E103RF	*KODAK PROFESSIONAL Color Reversal Films*
E113	*KODAK EKTACHROME 100 Plus Professional Films*
E-130	*KODAK EKTACHROME 64T Professional Film*
E-144	*KODAK EKTACHROME 160T Professional Film*
E-145	*KODAK EKTACHROME 320T Professional Film*
E-147	*KODAK EKTACHROME 1600 Professional Film*
E-161	*KODAK EKTACHROME 400X Professional Film*
E-163	*KODAK PROFESSIONAL EKTACHROME Film E100VS*
E-4024	*KODAK PROFESSIONAL EKTACHROME Films E100G and E100GX*
E-2529	*KODAK PROFESSIONAL EKTACHROME Duplicating Film EDUPE*
Z-119	*Using KODAK Chemicals, Process E-6*

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

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 EKTACHROME 64 Professional Film 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

KODAK EKTACHROME 64
Professional Film
KODAK Publication No. **E-8**
CAT 842 3741

Minor Revision 6-03
Printed in U.S.A.