

# KODAK PROFESSIONAL EKTACHROME Film E100VS



KODAK PROFESSIONAL EKTACHROME Film E100VS is a daylight-balanced, transparency film designed for KODAK Chemicals, Process E-6. This film features the most vivid, saturated (“VS”) colors available today in a 100-speed transparency film, a result of Kodak’s proprietary Color Amplifying Technology. This high color position is achieved while maintaining a neutral gray scale.

E100VS Film also features KODAK T-GRAIN® Emulsions for very fine grain and an unsurpassed level of sharpness in a 100-speed film.

Intended for location and studio shooting, E100VS Film is ideal for photographers who must create high-color transparency images that spring to life on the light box. It’s an appropriate choice for nature, scenics, wildlife, food, jewelry, and any subjects that call for brilliant, dramatic hues.

FEATURES	BENEFITS
<ul style="list-style-type: none"> <li>• Kodak’s proprietary color amplifying technology</li> </ul>	<ul style="list-style-type: none"> <li>• Outstanding color intensity</li> <li>• Neutral gray scale</li> <li>• Images that come to life on a light box</li> </ul>
<ul style="list-style-type: none"> <li>• KODAK T-GRAIN® Emulsion technology</li> </ul>	<ul style="list-style-type: none"> <li>• Exceptional sharpness</li> <li>• Very fine grain</li> </ul>
<ul style="list-style-type: none"> <li>• ISO 100 speed</li> </ul>	<ul style="list-style-type: none"> <li>• More versatility in available light</li> <li>• Capture more salable images</li> </ul>
<ul style="list-style-type: none"> <li>• Superb reciprocity</li> </ul>	<ul style="list-style-type: none"> <li>• No compensation required for exposures from 1/10,000 second to 10 seconds</li> </ul>

## 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
135-36	E100VS	5-mil (0.13 mm)
35 mm x 100 ft	E100VS / SP404*	
120	E100VS	3.9-mil (0.10 mm)
220		

\* Perforated on both edges.

Sheets	Film Code	ESTAR Thick Base
4 x 5 in.	E100VS	7-mil (0.18 mm)
8 x 10 in.		
KODAK PROFESSIONAL READYLOAD Single-Sheet Packet		
4 x 5"	E100VS	7-mil (0.18 mm)

\* For best results use with the KODAK PROFESSIONAL READYLOAD Single-Sheet Packet Film Holder, CAT No. 893 7542.

## STORAGE AND HANDLING

Load and unload film in subdued light.

Store unexposed film in a refrigerator 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 them in a cool, dry place. For more information on storing transparencies, 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 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 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	100
Photolamp (3400 K)	No. 80B	32
Tungsten (3200 K)	No. 80A	25

### 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	1/125	f/22
Bright, hazy sun, distinct shadows	1/125	f/16*
Weak, hazy sun, soft shadows	1/125	f/11
Cloudy bright, no shadows	1/125	f/8
Heavy overcast or open shade†	1/125	f/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	40	12
500	50	15
700	60	18
1000	70	21
1400	85	26
2000	100	30
2800	120	36
4000	140	42
5600	170	50
8000	200	60

\* BCPS = beam candlepower seconds

### Multiple Exposures with Electronic Flash

No filter corrections or exposure adjustments are required for up to 4 flashes (multipops).

## 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.

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
Unknown Fluorescent*	30M	+ $\frac{2}{3}$ stop

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

**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 here may not apply to other manufacturers' 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 exposures from 1/10,000 to 10 seconds.

**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.

## PROCESSING

Process E100VS Film in KODAK Chemicals, Process E-6.

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.

**Note:** KODAK PROFESSIONAL Film E100VS contains special sensitizing and filter dyes that improve color reproduction. Because these dyes are designed to rinse out of the film during processing, they will change the color of the first developer, the reversal bath, the final wash, and final rinse. This solution discoloration is only cosmetic. It will not affect the sensitometry or the quality of a Process E-6 film or control material. However, the solutions will cause splicing tape and processing equipment (rollers, racks, etc.) to have a pinkish color. The pink dye residue can easily be washed off processing equipment by following normal maintenance procedures.

## RETOUCHING TRANSPARENCIES

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 of E100VS Film by using a variety of Kodak materials.

### Duplicate Color Transparencies

For direct printing, use—

KODAK PROFESSIONAL EKTACHROME  
Duplicating Film EDUPE

### Color Prints

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

KODAK PROFESSIONAL PORTRA, SUPRA, and  
ULTRA ENDURA Papers

KODAK PROFESSIONAL ENDURA Clear Display  
Material

KODAK PROFESSIONAL ENDURA Transparency  
Display Material

KODAK PROFESSIONAL ENDURA Metallic Paper

## SCANNING TRANSPARENCIES

### For Graphic Arts Applications

The KODAK EKTACHROME Film family is characterized by sets of image dyes which perform very similarly when scanned. The scanner operator can setup a basic tone scale and color correction channel for 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-60E3A (35 mm slide) to establish the setup for KODAK EKTACHROME Films on all scanners. This target meets ANSI standards and represents 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 KODAK PCD Imaging Workstation applications.

For output to 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.

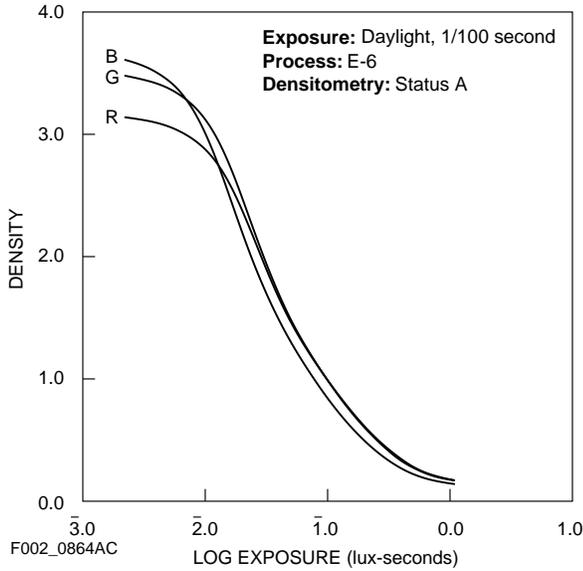
For output devices other than Photo CD players: The YCC data that results when using the Universal E-6 Film Term is capable of producing a high-quality duplicate of your original in terms of density, tone scale, and color reproduction. Final quality of your reproduced image depends on the capabilities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

# IMAGE STRUCTURE

## Diffuse rms Granularity\* 11 (very fine)

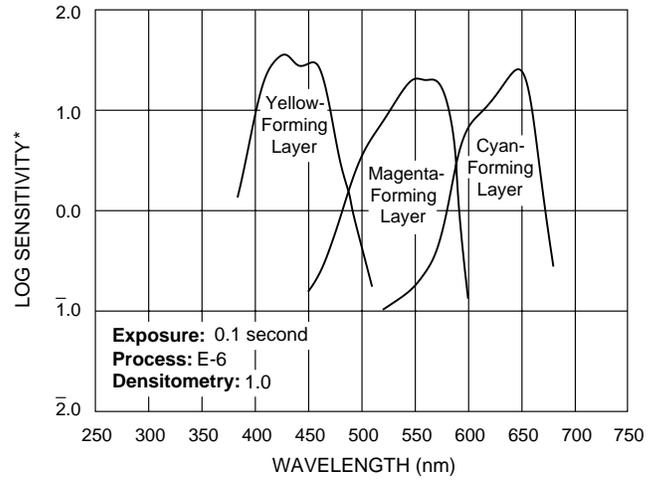
\* Read at a gross diffuse visual of 1.0, using a 48-micrometre aperture, 12X magnification.

### Characteristic Curves



F002\_0864AC

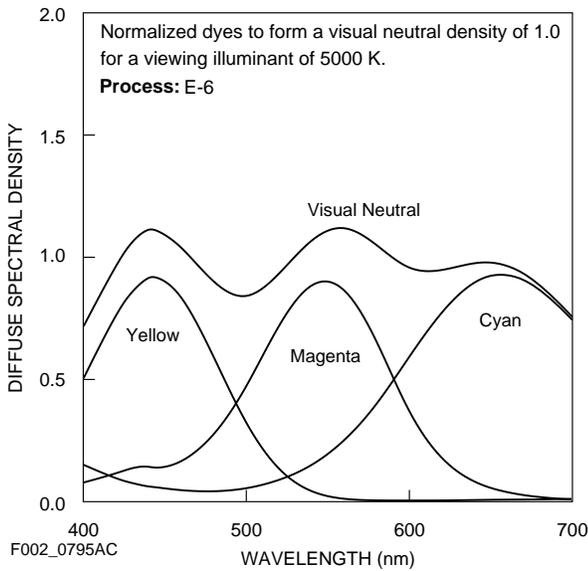
### Spectral-Sensitivity Curves



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

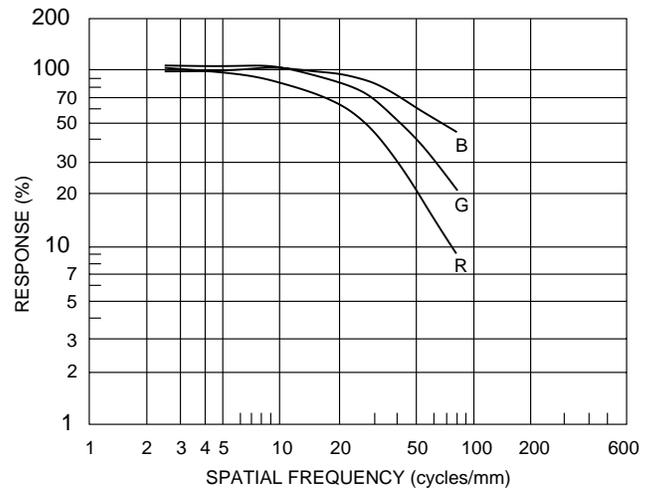
F002\_0794AC

### Spectral-Dye-Density Curves



F002\_0795AC

### Modulation-Transfer Curves



F002\_0862AC

**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 EKTACHROME Film E100VS

## 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-8 *KODAK EKTACHROME 64 Professional Film*
- 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 (Process E-6)*
- E-68 *Retouching Transparencies of KODAK EKTACHROME Film*
- E-113 *KODAK EKTACHROME 100 Plus Professional Film*
- 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 P1600 Professional Film*
- E-161 *KODAK EKTACHROME 400X Professional Film*
- E-4024 *KODAK PROFESSIONAL EKTACHROME Films E100G and E100GX*
- E-2519 *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 PROFESSIONAL Film E100VS are available from dealers who supply KODAK PROFESSIONAL Products. You can use other materials, but you may not obtain similar results.



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