

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

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. | Availability |
|---------------------------|---------------|-------------------|----------|---------------|
| 135-36, single roll | E100VS | 5-mil (0.13 mm) | 816 9773 | US&C |
| 135-36 (20-roll pro-pack) | | | 185 1211 | US&C |
| 35 mm x 100 ft | E100VS SP404* | | 830 5245 | Export & US&C |
| 120, single roll | E100VS | 3.9-mil (0.10 mm) | 828 3095 | Export |
| 120 (5-roll pro-pack) | | | 838 3440 | US&C |
| 220 (5-roll pro-pack) | | | 806 7423 | Export & US&C |

* Perforated on both edges.

| Sheets | Size | Film Code | ESTAR Thick Base | CAT No. | Availability |
|--|------------|-----------|------------------|----------|---------------|
| 10 | 4 x 5 in. | E100VS | 7-mil* (0.18 mm) | 158 1982 | Export |
| 50 | | | | 130 6596 | US&C |
| 50 | 8 x 10 in. | | | 138 1672 | US&C |
| KODAK PROFESSIONAL READYLOAD Single-Sheet Packet | | | | | |
| 20† | 4 x 5 | E100VS | 7-mil (0.18 mm) | 825 4328 | Export & US&C |

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

† 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 (multipos).

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

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 Digital III Color Paper
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 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.

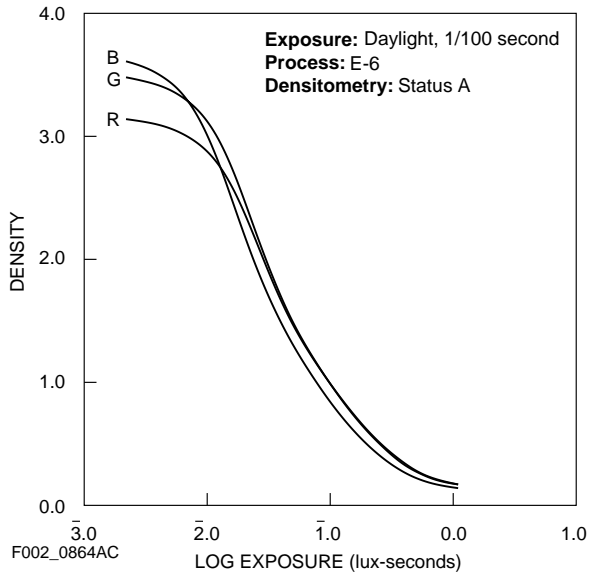
For output devices other than Photo CD players: The YCC data that results when using the Universal E-6 Film Term is capable of producing a high-quality duplicate of your original in terms of density, tone scale, and color reproduction. Final quality of your reproduced image depends on the capabilities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

IMAGE STRUCTURE

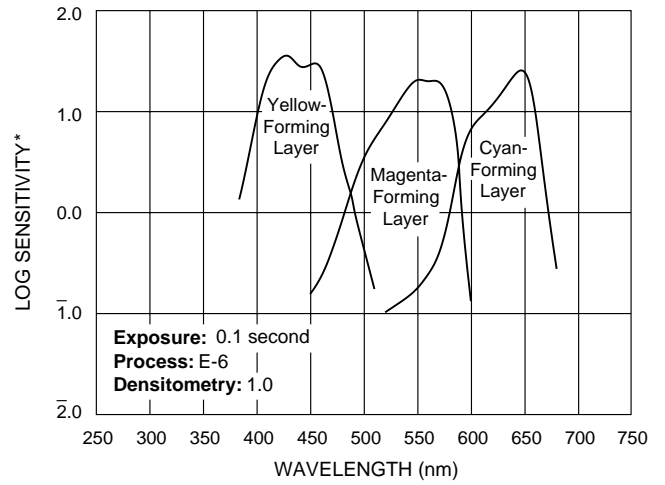
Diffuse rms Granularity* 11 (very fine)

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

Characteristic Curves

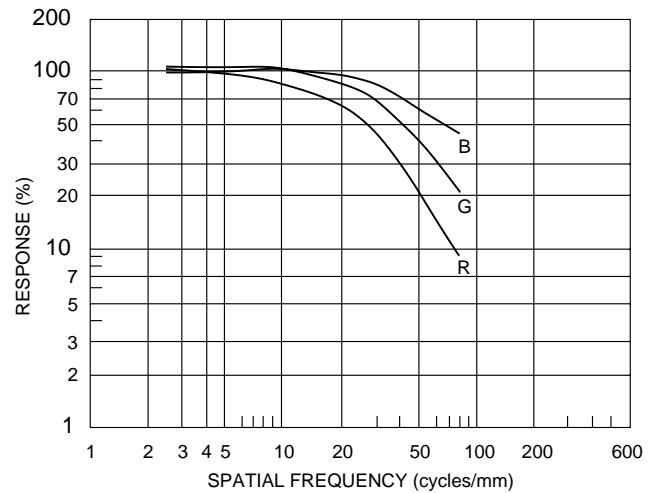


Spectral-Sensitivity Curves

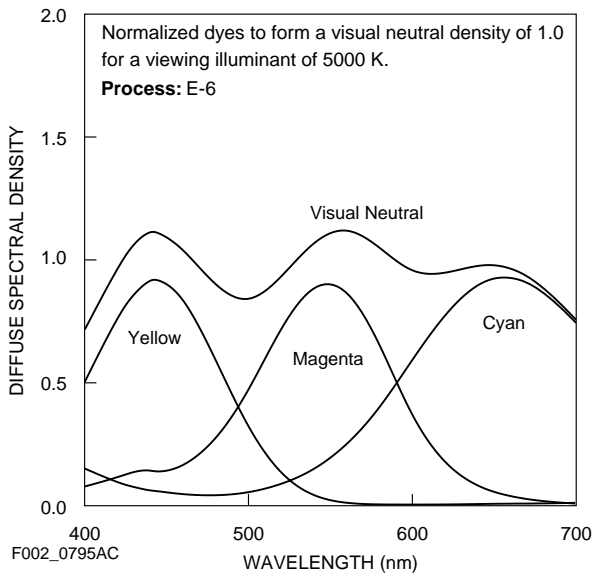


*Sensitivity = reciprocal of exposure (ergs/cm²) required to produce specified density

Modulation-Transfer 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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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.

Kodak Professional