KODAK PROFESSIONAL EKTACHROME Film E100VS

KODAK PROFESSIONAL EKTACHROME Film E100VS is a daylight-balanced, reversal film designed for KODAK Chemicals, Process E-6. This film features the most vivid, saturated ("**VS**") colors available today in any 100-speed transparency film, a result of Kodak's new 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
• Kodak's proprietary color amplifying technology (patent pending)	• The most vivid, saturated colors available today in a 100-speed film • Neutral gray scale • Images that come to life on a light box
• True 100 speed	• Industry standard • Compatible with Polaroid proofing films • More versatility in available light • Allows you to capture more usable images
• KODAK T-GRAIN® Emulsions	• Unsurpassed sharpness at 100 speed • Very fine grain structure
• Superb reciprocity	• No compensation required for exposures from 1/10,000 second to 10 seconds
• One-stop push-processing capability	• Extends the shooting range under existing light
• Ease-of-use features: – Large notes area on 135 magazine – Writable magazine surface with improved texture – Translucent (frosted) film cans	 – Room to record exposure information – Readily accepts indelible markers; reduces glare – Quick and easy product identification

SIZES AVAILABLE

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

Rolls	Code	Base	CAT No.	Availability
135-36, single roll	E100VS	5-mil acetate	841 0946	Export
			816 9773	US&C
135-36 (5-roll pro-pack)	E100VS	5-mil acetate	859 8989	US&C
135-36 (20-roll pro-pack)	E100VS	5-mil acetate	835 8723	Export
			185 1211	US&C
35 mm x 100 ft	E100VS	5-mil acetate	830 5245	Export & US&C
120, single roll	E100VS	3.9-mil acetate	828 3095	Export
			819 4391	US&C
120 (5-roll pro-pack)	E100VS	3.9-mil acetate	840 6191	Export
			838 3440	US&C
220 (5-roll pro-pack)	E100VS	3.9-mil acetate	806 7423	Export & US&C

Sheets	Size	Code [redacted]	Base	CAT No.	Availability
10	4 x 5 in.	E100VS	8.2-mil acetate	158 1982	Export
10	4 x 5 in.	E100VS	8.2-mil acetate	810 3368	Export
50				130 6596	US&C
10	8 x 10 in.	E100VS	8.2-mil acetate	864 4270	Export
10	8 x 10 in.	E100VS	8.2-mil acetate	116 9010	US&C
50				138 1672	
10	9 x 12 cm	E100VS	8.2-mil acetate	837 2781	Export
10	13 x 18 cm	E100VS	8.2-mil acetate	808 5409	Export

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.*

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	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 the effects of multiple, consecutive flashes (multipops) up to 4 flashes.

Fluorescent and High-Intensity Discharge Lamps

Use the color-compensating filters and exposure adjustments below as starting points to expose these films 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	+⅔ stop
Warm White	20C + 40M	+1 stop
Warm White Deluxe	30B + 30C	+ 1⅓ stops
Cool White	40M + 10Y	+ 1 stop
Cool White Deluxe	20C + 10M	+⅔ stop

Note: When you do not know the type of fluorescent lamps, try a 30M filter and increase exposure by ⅔ 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 ⅓ stops
General Electric Multi-Vapor	20R + 20M	+ ⅔ stop
Deluxe White Mercury	30R + 30M	+ 1 ⅓ stops
Clear Mercury	70R	+1 ⅓ stops

* A high-pressure sodium-vapor lamp. The information here 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 films to daylight. The data are based on average emulsions rounded to the nearest ⅓ stop and assume normal, recommended processing. Use the data only as a guide. For critical applications, make tests under your conditions.

PROCESSING

Chemicals

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 these films 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 EKTACHROME Duplicating Films

KODAK EKTACHROME RADIANCE III Overhead Material

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

KODAK VERICOLOR Print Film

KODAK VERICOLOR Slide Film

KODAK DURATRANS® RA Display Material

KODAK DURACLEAR™ RA 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, SUPRA and ULTRA Papers

KODAK DURAFLEX® RA Print 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 or Q-60E3 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.

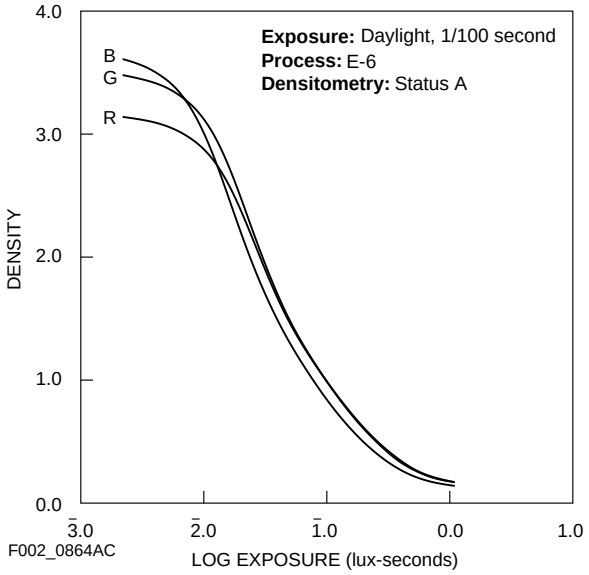
For output to Photo CD player: Using the Universal E-6 Film Term should result in an image that closely matches your original in density, tone scale, and overall color balance when viewed on a player.

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

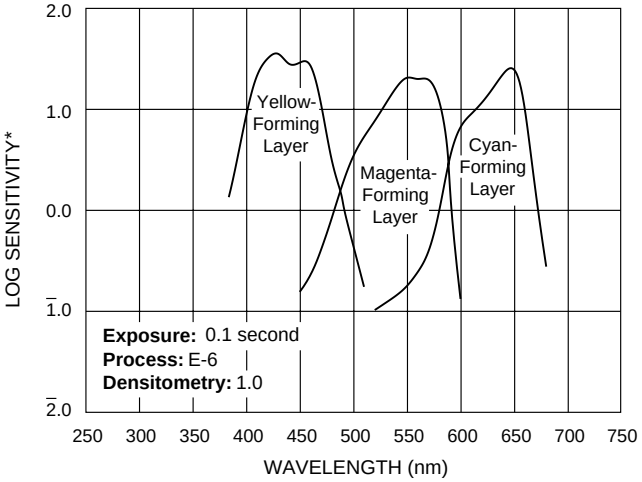
Diffuse rms Granularity* 11

Characteristic Curves



F002_0864AC

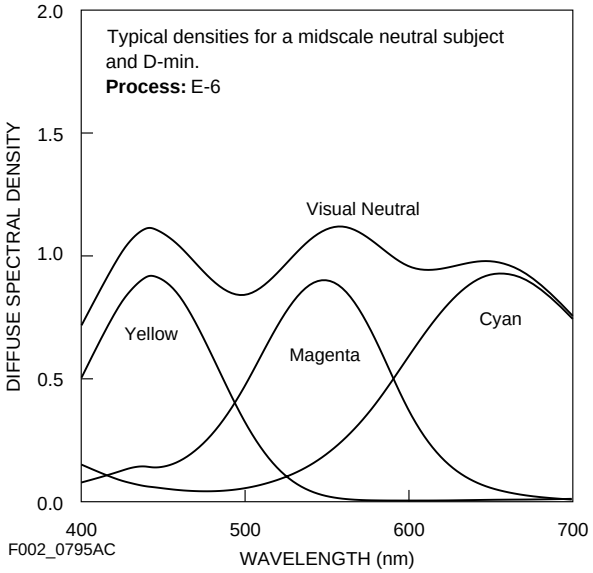
Spectral-Sensitivity Curves



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

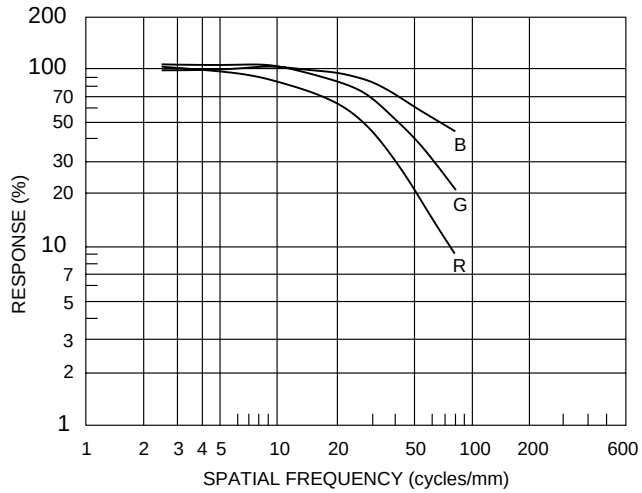
F002_0794AC

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.

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

MORE INFORMATION

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

Additional information is available on the Kodak website and through the U.S.A./Canada faxback system.

The following publications are available from Kodak Customer Service, 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-38	*KODAK EKTACHROME Duplicating Films (Process E-6)*
E-68	*Retouching Transparencies of KODAK EKTACHROME Film*
E103RF	*KODAK PROFESSIONAL Color Reversal Films*
E-164	*KODAK PROFESSIONAL EKTACHROME E100S and E100SW Films*
H3-995	*KODAK Q-60 Color Input Targets*

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

Many technical support publications for KODAK PROFESSIONAL Products can be sent to your **fax** machine from the Kodak Information Center. Call:
U.S.A. 1-800-242-2424, Ext. 33 / Canada 1-800-295-5531 — Available 24 hours a day, 7 days a week—

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 E100VS 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
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