



TI0835

Revised 6-93

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## EASTMAN Color Negative Film 5247

### 1) Description

EASTMAN Color Negative Film 5247 (35mm) is a camera film intended for general motion-picture production. Its wide latitude makes it especially suitable for both indoor and outdoor photography under a wide variety of conditions. 5247 film is balanced for use with tungsten light. You can also expose it with daylight filters. The emulsion contains a colored-coupler mask to achieve good color reproduction in release prints. This film has high sharpness, fine grain, and excellent color rendition.

### 2) Base

EASTMAN Color Negative Film 5247 has a clear acetate safety base with rem-jet backing.

### 3) Darkroom Recommendations

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

### 4) Storage

Store unexposed film at 55 F (13 C) or lower. For extended storage, store it at 0 F (-18 C) or below. Process exposed film promptly. Store processed film at 70 F (21 C) or lower at a relative humidity of 40 to 50 percent for normal commercial storage; for long-term storage, store it at 35 to 50 F (2 to 10 C) at 15 to 30% relative humidity. For more information on long-term storage, see KODAK Publications No. H-1, EASTMAN Professional Motion Picture Films, and No. H-23, The Book of Film Care.

### 5) Exposure Indexes

Tungsten (3200K) - 125/22 Daylight<sup>1</sup> - 80/20

Use these indexes with incident- or reflected-light exposure meters and cameras marked for ISO or ASA speeds or exposure indexes. These indexes apply for meter readings of average subjects made from the camera position or for readings made from a gray card of 18-percent reflectance (such as one of the KODAK Gray Cards, KODAK Publication No. R-27) held close to and in front of the subject. For unusually light- or dark-colored subjects, decrease or increase the exposure indicated by the meter accordingly.

### 6) Color Balance

This film is balanced for exposure with tungsten illumination (3200K). You can also expose them with tungsten lamps that have slightly higher or lower color temperatures (+/- 150K) without correction filters, since final color balancing can be done in printing. For other light sources, use the correction filters in the table below.

<sup>1</sup>With a KODAK WRATTEN Gelatin Filter No. 85.

Light Source	KODAK Filters on Camera <sup>1</sup>	Exposure Index/DIN
Tungsten (3000 K)	WRATTEN Gelatin No. 82B	80/20
Tungsten (3200 K)	None	125/22
Tungsten photoflood(3400 K)	None	125/22
Daylight (5500 K)	WRATTEN Gelatin No. 85	80/20
White-Flame Arcs	WRATTEN Gelatin No. 85B + 20G	64/19
Yellow-Flame Arcs	Color Compensating 40Y	80/20
Optima 32	None	125/22
Vitalite	WRATTEN Gelatin No. 85	80/20
Fluorescent, Cool White <sup>2</sup>	Color Compensating 50R + 20Y	50/18
Fluorescent, Deluxe Cool White <sup>2</sup>	WRATTEN Gelatin No. 85C	80/20
Metal Halide	WRATTEN Gelatin No. 85	80/20

<sup>1</sup> These are approximate corrections only. Make final corrections during printing.

<sup>2</sup> These are starting-point recommendations for trial exposures. If the kind of lamp is unknown, a KODAK Color Compensating Filter CC40R can be used with an exposure index (EI) of 64/19.

**NOTE:** Consult the manufacturer of high-intensity ultraviolet lamps for safety information on ultraviolet radiation and ozone generation.

## 7) Exposure Table-Tungsten Light

At 24 frames per second (fps), 170-degree shutter opening:

Lens Aperture	f/1.4	f/2	f/2.8	f/4	f/5.6	f/8	f/11
Footcandles Required	20	40	80	160	320	630	1250

Use this table for average subjects that contain a combination of light, medium, and dark colors. When a subject includes only pastels, use at least 1/2 stop less exposure; dark colors require 1/2 stop more exposure.

### Lighting Contrast -

The recommended ratio of key-light-plus-fill-light to fill light is 2:1 or 3:1. However, you may use 4:1 or greater when a particular look is desired.

## 8) Reciprocity Characteristics

You do not need to make any filter corrections or exposure adjustments for exposure times from 1/10,000 to 1/10 second. At an exposure time of 1 second, use a KODAK Color Compensating Filter CC10Y and increase exposure by 1/2 stop.

## 9) Processing

Most commercial motion-picture laboratories provide a processing service for these films. There are no packaged chemicals available for preparing the processing solutions. See KODAK Publication No. H-24, Manual for Processing EASTMAN Color Films, Process ECN-2 Specifications, Module 7, for more information on the solution formulas and the procedures for machine processing these films.

## 10) Identification

After processing, the product code numbers 5247 (35 mm), emulsion and roll number identification, KEYCODE numbers, and internal product symbol (B) are visible along the length of the film.

## 11) Laboratory Aim Density (LAD)

To maintain optimum quality and consistency in the final prints, the laboratory must carefully control the color timing, printing, and duplicating procedures. To aid in color timing and curve placement, negative originals should be timed relative to Laboratory Aim Density (LAD) Control Film supplied by Eastman Kodak Company.<sup>2</sup> The LAD Control Film provides both objective sensitometric control and subjective verification of the duplicating procedures used by the laboratory.

In the LAD Control Method,<sup>3</sup> the electronic color analyzer used for color timing is set-up with the LAD Control Film to produce a gray video display of the LAD patch, corresponding to 1.0 neutral density (gray) on the print. The negative printing original is then scene-to-scene timed. There are specific LAD values for each type of print or duplicating film that the original can be printed on. For print films, the LAD patch is printed to a neutral gray of 1.0 visual density. For duplicating films, the specified aims are at the center of the usable straight-line portion of the sensitometric curve of the film.

## 12) Film-To-Video Transfers

When you transfer the film directly to video, you can set up the telecine using the negative Telecine Analysis Film (TAF) supplied by EASTMAN Kodak Company. The TAF consists of a neutral density scale and an eight-bar color test pattern with a LAD gray surround.

The TAF gray scale provides the telecine operator (colorist) with an effective way to adjust subcarrier balance and to center the telecine controls before timing and transferring a film. The TAF color bars provide the utility of electronic color bars, even though they do not precisely match the electronically generated color bars. Using the TAF will help obtain optimum quality and consistency in the film-to-video transfer.

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<sup>2</sup>Direct any inquiries to one of the regional sales offices.

<sup>3</sup>Use of the LAD Control Method is described in the paper, "A Simplified Motion-Picture Laboratory Control Method for Improved Color Duplication," by John P. Pytlak and Alfred W. Fleischer in the October 1976 SMPTE Journal.

### 13) Image Structure

The modulation-transfer curves, the diffuse rms granularity, and the resolving-power data were generated from samples of 5247 Film exposed with tungsten light and processed as recommended in Process ECN-2 chemicals. For more information on image-structure characteristics, see KODAK Publication No. H-1, EASTMAN Professional Motion Picture Films.

**rms Granularity: less than 5**

Read with a microdensitometer, (red, green, blue) using a 48-micrometre aperture.

**Resolving Power**

ISO RPL	50 lines/mm	(TOC 1.6:1)
ISO RP	100 lines/mm	(TOC 1000:1)

Determined according to a method similar to the one described in ISO 6328-1982, Photography—Photographic Materials-Determination of ISO Resolving Power.

### 14) Available Roll Lengths

For information on film roll lengths, check Kodak's Motion Picture Films for Professional Use price catalog or see a Kodak sales representative in your country.

### 15) Graphs<sup>4</sup>

**MTF**

a) (6-83)

**NOTE:** These photographic modulation-transfer values were determined by using a method similar to the one described in ANSI Standard PH2.39-1977(R1984). The film was exposed with the specified illuminant to spatially varying sinusoidal test patterns having an aerial image modulation of a nominal 60 percent at the image plane, with processing as indicated. In most cases, the photographic modulation-transfer values are influenced by development-adjacency effects and are not equivalent to the true optical modulation-transfer curve of the emulsion layer in the particular photographic product.

**Characteristic**

b) (6-83)

**Spectral Sensitivity**

c) (6-83)

**Spectral Dye Density**

d) (6-83)

**NOTE:** The Kodak materials described in this publication for use with EASTMAN Color Negative Film 5247 are available from dealers who supply Kodak products. You can use other materials, but you may not obtain similar results.

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<sup>4</sup>NOTICE: While the data presented are typical of production coatings, they do not represent standards that must be met by Kodak. Varying storage, exposure, and processing conditions will affect results. The company reserves the right to change and improve product characteristics at any time.

The contents of this publication are subject to change without notice.

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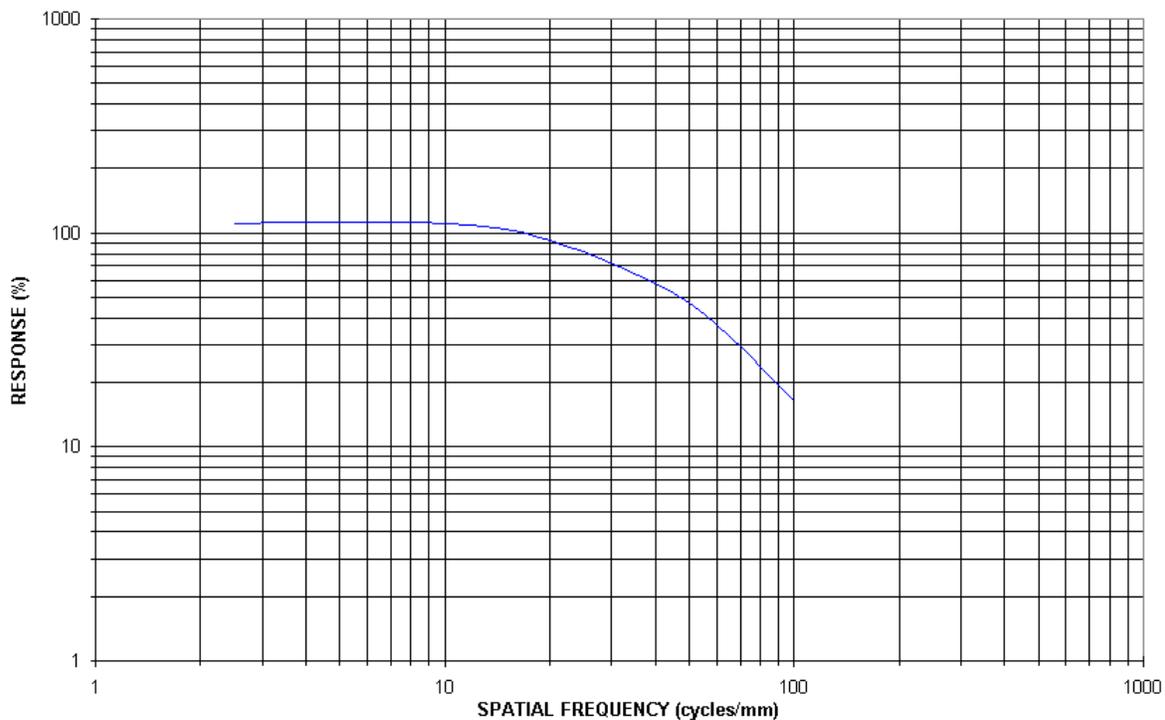
Professional Motion Imaging  
EASTMAN KODAK COMPANY - Rochester, NY 14650

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**End of Data Sheet**

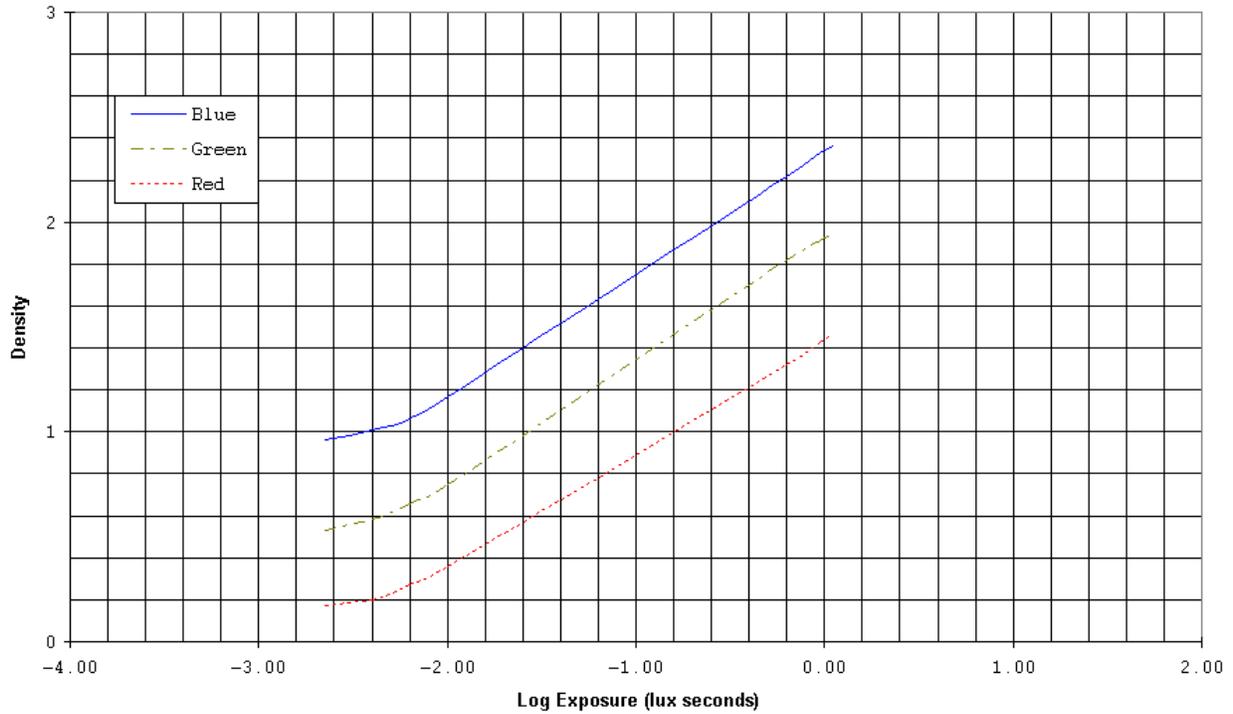
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TI0835A 6-83  
MTF, For Publication  
EASTMAN Color Negative Film 5247  
Tungsten (3200K); Process ECN-2, Diffuse visual



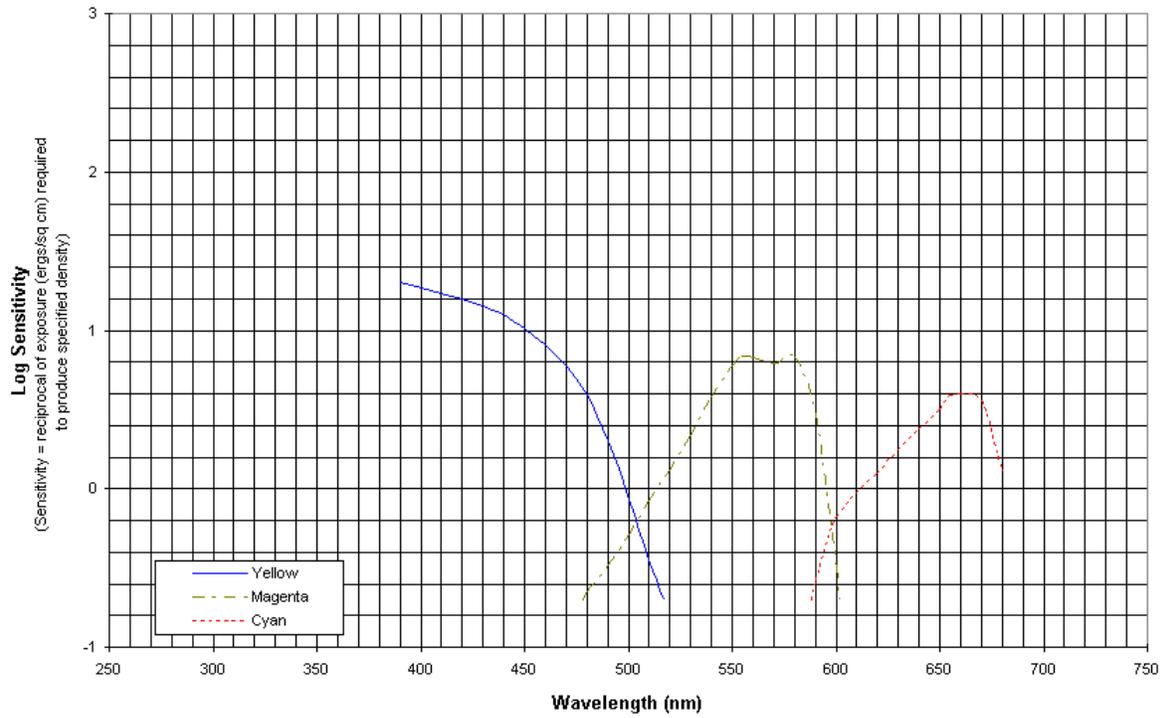
Notice: While the data presented are typical of production coatings, they do not represent standards which must be met by Eastman Kodak Company. Varying storage, exposure, and processing conditions will affect results. The company reserves the right to change and improve the product characteristics at any time.

**TI0835B 6-83**  
CHARACTERISTIC, For Publication  
EASTMAN Color Negative Film 5247  
Tungsten 1/50 sec; Process ECN-2; Status M



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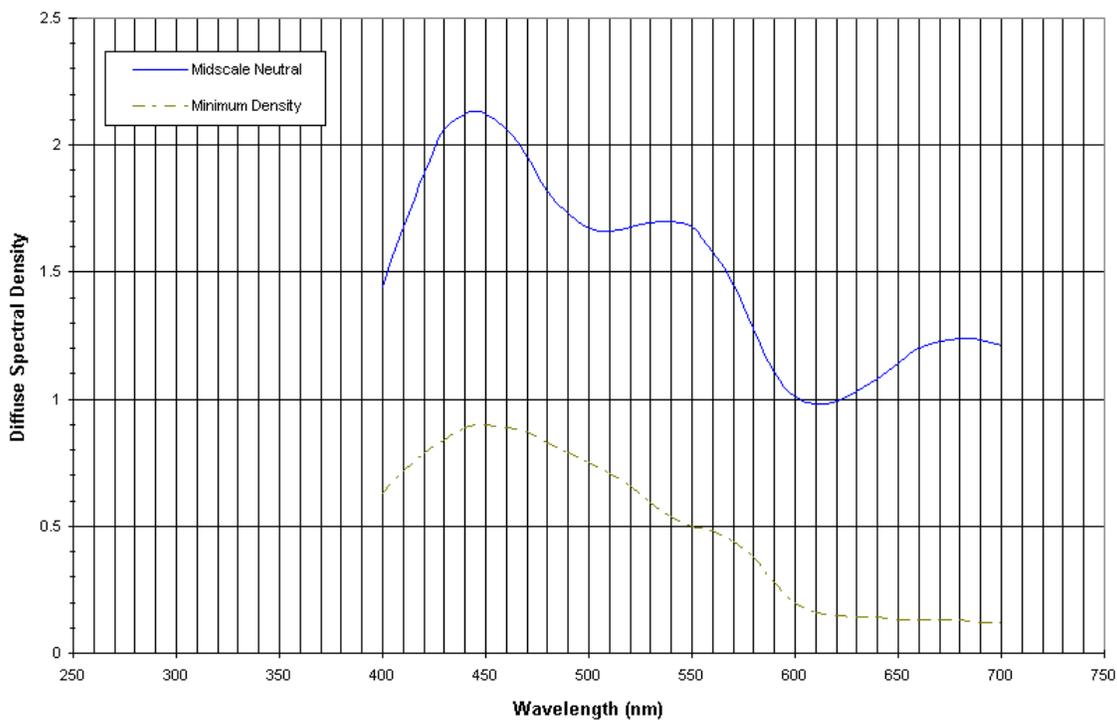
**TI0835C 6-83**  
SPECTRAL SENSITIVITY, For Publication  
EASTMAN Color Negative Film 5247  
Effective Exp 1.4 sec; Process ECN-2; Status M;  
D=1.0>D-min



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**TI0835D 6-83**  
SPECTRAL DYE DENSITY, For Publication

EASTMAN Color Negative Film 5247  
Process ECN-2; Typical densities for a midscale neutral subject and D-min



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