

# KODAK TRI-X Reversal Film 7266

**Kodak**

## TECHNICAL DATA / BLACK-AND-WHITE REVERSAL FILM

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We are committed to black & white film—improvements to our family of reversal films prove it. New KODAK TRI-X Reversal Film 7266 offers finer grain and increased sharpness, and includes EASTMAN KEYCODE Numbers for easy cross-reference of shots in minutes, not hours. Reduced static support allows for a cleaner image throughout the filmmaking process. And because our new films do not require processing in a bleach containing heavy metals, they are easier on the environment. Our improved films provide the rich blacks and high contrast you have come to expect from KODAK Black & White reversal films.

KODAK TRI-X Reversal Film 7266 (16 mm) is a high-speed, panchromatic black-and-white film with an antihalation undercoat that makes it suitable for general interior photography with artificial light. It can also be used in daylight and is particularly useful for sports pictures taken at regular speed or slow motion in weak light (overcast sky or late in the day). This film is characterized by excellent tonal gradation and sharpness.

When processed as a reversal film, the resulting positive can be used for projection or for duplication. If processed as a negative material by conventional methods, the film will yield satisfactory results, although there will be some loss in speed and an increase in granularity.

### BASE

KODAK TRI-X Reversal Film 7266 has a grey acetate safety base with an additional anti-halation undercoat. The back side of the base contains an anti-static layer with a carnauba wax lubricant.

## DARKROOM RECOMMENDATIONS

### Reversal Processing

All processing operations should be carried out in total darkness until the bleaching step has been completed. If necessary, the film can be examined (for a few seconds only) after development is 50 percent complete. Use a KODAK 3 Safelight Filter / dark green, with a 15-watt bulb, no closer to the film than 1.2 metres (4 feet). Following bleaching, normal room lighting can be used.

### Negative Processing

No safelight is recommended until after the stop bath. Unprocessed films must be handled in total darkness.

## STORAGE

Store unexposed film at 13°C (55°F) or lower. For extended storage, store at -18°C (0°F) or lower. Process exposed film promptly. Store processed film according to the recommendations in ANSI/PIMA IT9.11-1998: for medium-term storage (minimum of ten years), store at 10°C (50°F) or lower at a relative humidity of 20 to 30 percent; for extended-term storage (for preservation of material having permanent value), store at 2°C (35°F) or lower at a relative humidity of 20 to 30 percent. For active use, store at 25°C (77°F) or lower, at a relative humidity of 50 +/- 5 percent. This relates to optimized film handling rather than preservation; static, dust-attraction and curl-related problems are generally minimized at the higher relative humidity. After usage, the film should be returned to the appropriate medium- or long-term storage conditions as soon as possible.

For more information about medium- and long-term storage, see ANSI/PIMA IT9.11-1998, SMPTE RP131-2002, and KODAK Publications No. H-845, *The Essential Reference Guide for Filmmakers*.

## EXPOSURE INDEXES

Tungsten (3200K) - 160 Daylight - 200<sup>1</sup>

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 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.

## 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 |
|------------------------|-------|-----|-------|-----|-------|-----|
| Footcandles Required * | 16    | 32  | 64    | 125 | 250   | 500 |

\* At 18 frames per second, use 3/4 of the footcandles (fc) shown. When the film is used as a negative material, the values specified should be doubled.

## 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.

## FILTER FACTORS

| KODAK WRATTEN Filter No. | 3   | 8 | 8N5 | 12 | 15  | 21 | 25 | 29 | 96* |
|--------------------------|-----|---|-----|----|-----|----|----|----|-----|
| Daylight                 | 1.5 | 2 | 4   | 2  | 2.5 | 3  | 10 | 40 | 8   |

\* For use in bright sunlight to reduce the exposure without modifying color rendering or depth of field. This filter which has a neutral density of 0.90 provides a reduction in exposure equivalent of 3 full stops.

## RECIPROCITY CHARACTERISTICS

You do not need to make any exposure adjustments for exposure times from 1/1,000 to 1 second. If your exposure is in the 1/10,000 second range, it is recommended that you increase your exposure by 1/2 stop.

## REVERSAL PROCESSING

### KODAK B&W Reversal Process

This film should be processed with KODAK B&W Reversal Process Kit Chemicals or with solutions prepared according to the formulas presented in KODAK Publication No.H-24.15, *Manual for Processing KODAK Motion Picture Films, Module 15*.

**Note: KODAK B&W Reversal First Developer and Replenisher (D-94A) and KODAK B&W Reversal Bleach and Replenisher (R-10) should be used with this film.**

The recommended starting points for processing times and temperatures are shown in the table below. Actual processing times may differ from the ones shown because of machine design variables, such as film transport speed, degree of solution agitation, amount of solution carry-over, etc.

| Process Step  | Time<br>24.4°C (76°F)  |
|---|------------------------|
| First Developer<br>KODAK B&W Reversal First Developer and Replenisher (D-94A) | 60 sec                 |
| Wash  | 30 sec                 |
| KODAK B&W Reversal Bleach and Replenisher (R-10)                              | 60 sec                 |
| Wash  | 30 sec                 |
| Clearing Bath   | 30 sec                 |
| Wash  | 30 sec                 |
| Re-exposure   | 800 footcandle seconds |
| Second Developer<br>KODAK B&W Reversal Developer and Replenisher (D-95)       | 30 sec                 |
| Wash  | 30 sec                 |
| Fixer   | 30 sec                 |
| Wash  | 2 min                  |

**Notice:** Observe precautionary information on product labels and on the Material Safety Data Sheets.

## IDENTIFICATION

After processing, the product code numbers 7266, emulsion and roll number identification, emulsion letter designator ED, and KEYCODE number are visible along the length of the film.

## AVAILABLE ROLL LENGTHS

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

<sup>1</sup> Super 8 automatic cameras will expose the film at ASA 160 due to the ANSI standard cartridge.

## IMAGE STRUCTURE

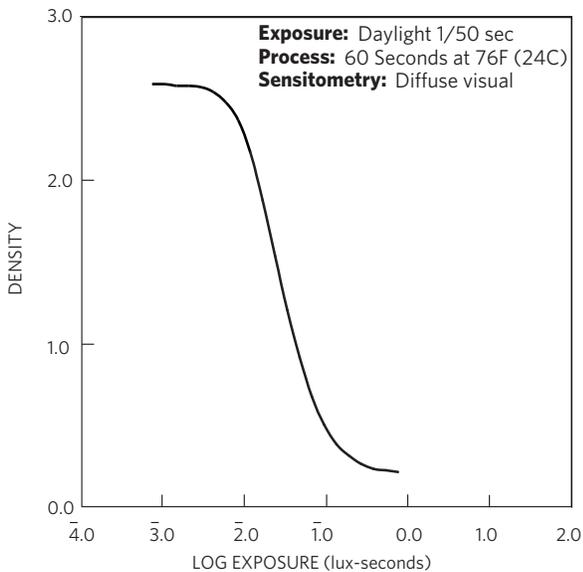
The modulation-transfer curves and the diffuse rms granularity were generated from samples of 7266 Film exposed with tungsten light and processed in the recommended reversal process at 24.4°C (76°F). For more information on image-structure characteristics, see KODAK Publication No. H-845, *The Essential Reference Guide for Filmmakers*.

**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.

## Sensitometry

Sensitometric curves determine the change in density on the film for a given change in log exposure.

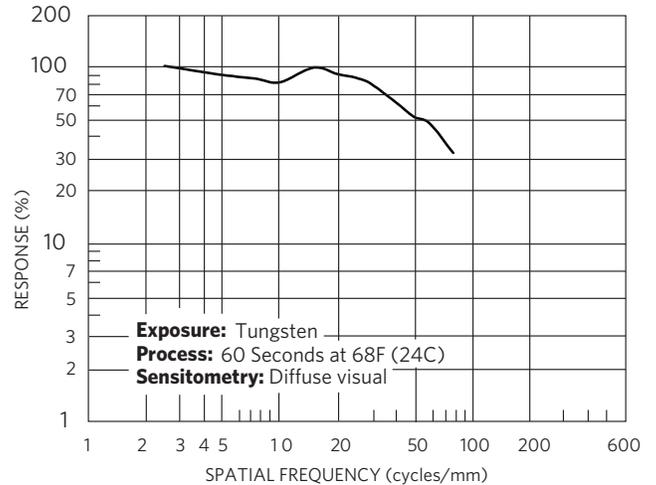
**Characteristic Curve**



## Modulation Transfer Function

The "perceived" sharpness of any film depends on various components of the motion picture production system. The camera and projector lenses and film printers, among other factors, all play a role. But the specific sharpness of a film can be measured and is charted in the Modulation Transfer Function Curve.

**Modulation Transfer Function Curve**



This graph shows a measure of the visual sharpness of this film. The x-axis, "Spatial Frequency," refers to the number of sine waves per millimeter that can be resolved. The y-axis, "Response," corresponds to film sharpness. The longer and flatter the line, the more sine waves per millimeter that can be resolved with a high degree of sharpness—and, the sharper the film.

**Note:** These photographic modulation-transfer values were determined by using a method similar to the one described in ANSI Standard PH2.39-1977(R1990). 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.

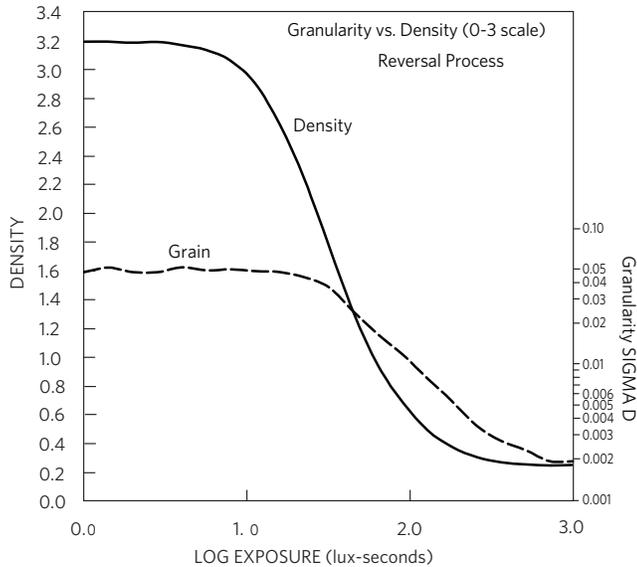
# KODAK TRI-X Reversal Film 7266

## rms Granularity

Read with a microdensitometer using a 48-micrometer aperture.

The "perception" of the graininess of any film is highly dependent on scene content, complexity, color, and density. Other factors, such as film age, processing, exposure conditions, and telecine transfer may also have significant effects.

**rms Granularity Curve**



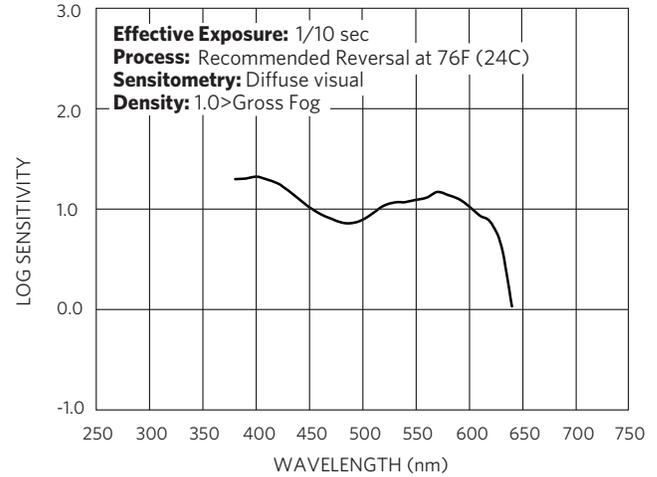
To find the rms Granularity value for a given density, find the density on the left vertical scale and follow horizontally to the characteristic curve and then go vertically (up or down) to the granularity curve. At that point, follow horizontally to the Granularity Sigma D scale on the right. Read the number and multiply by 1000 for the rms value. Note: This curve represents granularity based on modified measuring techniques.

**Note:** Sensitometric and Diffuse RMS Granularity curves are produced on different equipment. A slight variation in curve shape may be noticed.

## Spectral Sensitivity

These curves depict the sensitivity of this film to the spectrum of light.

**Spectral Sensitivity Curve**



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

## MORE INFORMATION

Outside the United States and Canada, please contact your Kodak representative.

You can also visit our web site at [www.kodak.com/go/motion](http://www.kodak.com/go/motion) for further information. You may want to bookmark our location so you can find us easily the next time.

|       |  |
|-------|--|
| H-2   | <i>Cinematographer's Field Guide</i>   |
| H-845 | <i>The Essential Reference Guide for Filmmakers</i>  |
| H-24  | <i>Manual for Processing KODAK Motion Picture Films, Processing Black-and-White Films, Module 15</i> |
| H-61  | <i>LAD—Laboratory Aim Density</i>  |
| H-606 | <i>KODAK Telecine Tool Kit and Reference Manual</i>  |

**Note:** The Kodak materials described in this publication for use with KODAK TRI-X Reversal Film 7266 are available from dealers who supply Kodak products. You can use other materials, but you may not obtain similar results.

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