KODAK VISION 800T Color Negative Film / 5289, 7289

1) Description
KODAK VISION 800T Color Negative Film / 5289 (35 mm), 7298 (16 mm) is a very high-speed tungsten-balanced color negative camera film. Built from the KODAK VISION technology, this film offers excellent image quality and the highest capture speed available in the motion picture market. VISION 800T Film features wide under and over exposure latitude, accurate color reproduction and flesh-to-neutral balance, and intercuttability with other KODAK VISION camera negative films. The very high speed provides for enhanced shadow detail, and crisp, rich blacks in either prints or telecine transfers. This film allows for increased creative flexibility in low light, available light, fast action, anamorphic, super 35 mm, and other filming conditions, where systems speed is vitally important.

2) Base
KODAK VISION 800T Film / 5289,7289 has an 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 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.


5) Exposure Indexes
Tungsten (3200K) - 800 / Daylight1 * - 500

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.

1With a KODAK WRATTEN Gelatin Filter No. 85.
6) **Color Balance**

These films are 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.

<table>
<thead>
<tr>
<th>Light Source</th>
<th>KODAK Filters on Camera [1]</th>
<th>Exposure Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tungsten (3000 K)</td>
<td>WRATTEN Gelatin No. 82B</td>
<td>500</td>
</tr>
<tr>
<td>Tungsten (3200 K)</td>
<td>None</td>
<td>800</td>
</tr>
<tr>
<td>Tungsten Photoflood (3400 K)</td>
<td>None</td>
<td>800</td>
</tr>
<tr>
<td>Daylight (5500 K)</td>
<td>WRATTEN Gelatin No. 85</td>
<td>500</td>
</tr>
<tr>
<td>White-Flame Arcs</td>
<td>WRATTEN Gelatin No. 85B</td>
<td>320</td>
</tr>
<tr>
<td>Yellow-Flame Arcs</td>
<td>Color Compensating 20Y</td>
<td>500</td>
</tr>
<tr>
<td>OPTIMA 32</td>
<td>None</td>
<td>800</td>
</tr>
<tr>
<td>VITALITE</td>
<td>WRATTEN Gelatin No. 85</td>
<td>500</td>
</tr>
<tr>
<td>Fluorescent, Cool White [2]</td>
<td>WRATTEN Gelatin No. 85 + 10M</td>
<td>320</td>
</tr>
<tr>
<td>Fluorescent, Deluxe Cool White [2]</td>
<td>WRATTEN Gelatin No. 85C + 10R</td>
<td>500</td>
</tr>
<tr>
<td>Metal Halide (H.M.I.)</td>
<td>WRATTEN Gelatin No. 85</td>
<td>500</td>
</tr>
</tbody>
</table>

[1] These are approximate corrections only. Make final corrections during printing.

[2] These are starting-point recommendations for trial exposures. If the kind of lamp is unknown, a KODAK Color Compensating Filter CC 40R can be used with an exposure index (EI) of 400.

**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:

<table>
<thead>
<tr>
<th>Lens Aperture</th>
<th>f/1.4</th>
<th>f/2</th>
<th>f/2.8</th>
<th>f/4</th>
<th>f/5.6</th>
<th>f/8</th>
<th>f/11</th>
<th>f/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Footcandles Required</td>
<td>3</td>
<td>6</td>
<td>12.5</td>
<td>25</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>400</td>
</tr>
</tbody>
</table>

8) **Reciprocity Characteristics**

You do not need to make any filter corrections or exposure adjustments for exposure times from 1/1000 to 1 second. If your exposure is in the 10 second range, it is recommended that you increase your exposure 2/3 stop.
9) Processing


Most commercial motion-picture laboratories provide a processing service for these films. See KODAK Publication No. H-24.07, Processing KODAK Color Negative Motion Picture Films, Module 7, for more information on the solution formulas and the procedure for machine processing these films. There are also pre-packaged kits available for preparing the processing solutions. For more information on the EASTMAN ECN-2 Kit Chemicals, check Kodak's Motion Picture Films for Professional Use price catalog.

10) Identification

After processing, the product code numbers 5289 (35 mm) or 7289 (16 mm), emulsion and roll number identification, KEYKODE numbers, and internal product symbol (R) 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. 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, 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 KODAK VISION 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. For more information regarding TAF, see KODAK Publication No. H-9, TAF User's Guide.

13) Image Structure

The modulation-transfer curves, the diffuse rms granularity, and the resolving-power data were generated from samples of 5289 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, KODAK Motion Picture Film.

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2Direct any inquiries to one of the regional sales offices.

MTF:
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 charted in the Modulation Transfer Curve.

rms Granularity:
Refer to curve. Read with a microdensitometer, (red, green, blue) using a 48-micrometre 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.

14) 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.

15) Graphs

Characteristic
A) (6-98)
MTF
B) (6-98)
MTF curve - This graph shows a measure of the visual sharpness of the film. The x-axis, "Spatial Frequency", refers to the number of sine waves per millimetre that can be resolved. The y-axis, "Response", corresponds to film sharpness. The longer and flatter the line, the more the film can resolve, and therefore, 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.

Granularity
C) (6-98)
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.

Spectral Sensitivity
D) (6-98)
Spectral Sensitivity curve - These curves depict the sensitivity of this film to the spectrum of light. They are useful for adjusting optical printers and film recorders, and for determining, modifying, and optimizing exposure for blue- and green-screen special-effects work.

4NOTICE: The 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 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.
Spectral Dye Density

Processing exposed color film produces cyan, magenta, and yellow dye images in the three separate layers of the film. The spectral dye density curves indicate the total absorption by each color dye measured at a particular wavelength of light and the visual neutral density at (1.0) of the combined layers measured at the same wavelengths.

The wavelengths of light, expressed in nanometers (nm) are plotted on the x-axis, and the corresponding diffuse spectral densities are plotted on the y-axis.

Characteristic-Camera Stops

On the Characteristic-Camera Stop curve, the center point ("0") on the x-axis corresponds to a normal exposure of an 18-percent gray card in the red, green, and blue layers of this film. To determine optimum lighting levels, shoot an exposure series and establish the density of a normally exposed 18-percent gray card. Use the sensitometric curves to estimate density changes caused by altered exposure conditions. Note that one stop exposure change corresponds to a 0.3 log exposure change to the film, and a change of 0.025 in density is approximately equal to one printer light in laboratory color timing.

Note: The Kodak materials described in this publication for use with KODAK VISION 800T Color Negative Film / 5289,7289 are available from dealers who supply Kodak products. You can use other materials, but you may not obtain similar results.

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

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TI2396A

CHARACTERISTIC, For Publication

KODAK VISION 800T Color Negative Film 22082/7218
3200 K Tungsten 160 sec, Process BCN-2, Status M4

eLogF = 0.00

Notice: While the data presented are typical of production calendars, they do not represent standard
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 anytime.
T12396F 6-98
CHARACTERISTIC, For Publication

KODAK VISION 200T Color Negative Film 500/709
3210K; F/5.6; 1/250 sec; ISO 100; ASA 2; Status M
Camera Stops 0 = Normal; Log Exposure; 0.5 sec

Notice: While the data presented are typical of production results, 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.
Notice: While the data presented are typical of production product, they do not represent standards which must be met by Eastman Kodak Company. Visual inspection, exposure, and processing conditions will affect results. This company reserves the right to change and improve the product characteristics at any time.
Notice: Values presented are typical of production coatings, they do not represent standards which might 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.
TI2396 L-58
SPECTRAL SENSITIVITY, For Publication
KODAK VISION 300T Color Negative Film 5290, 7210
Effective exp. D130 sec, Process ECN 2, Status M, D=0.4-0.6 min

Log Sensitivity
(Equivalent - logarithm of exposure or gray scale required to produce a specific density)

Wavelength (nm)

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