

Editorial Background:

Behind the Design of KODAK VISION3 200T Color Negative Film 5213/7213

The latest member of the VISION3 family of films is KODAK VISION3 200T Color Negative Film 5213/7213. The VISION3 platform is the result of a confluence of technical innovations that gives filmmakers greater creative flexibility and a better starting place for postproduction. Here, Kodak's Product Systems Engineer Merrick Distant answers questions about the science behind the new film:

The new KODAK VISION3 200T stock delivers VISION3 technology in a medium-speed, tungsten-balanced film. What are the features of this new negative?

DISTANT: We incorporated many of the features that customers have come to like about our other VISION3 films. The result is a tungsten-balanced film that renders images with similar color and contrast, with more detail in the extreme bright areas and finer grain in the underexposure area. Lower noise in the underexposure areas results in more usable detail, which is helpful in digital postproduction applications.

What is the emulsion science behind these improvements?

DISTANT: We used advanced dye layering technology in the red and green layers, and smaller, Sub-Micron Imaging Sensors in the red, green and blue layers. The Sub-Micron Imaging sensors enable increased image discrimination as light intensity increases, improving signal-to-noise response and extending highlight latitude by two additional stops. This new film also uses triple coated magenta and cyan layers, which gives us increased flexibility in creating a more linear sensitometric response as a function of exposure. VISION3 films also take advantage of new Advanced Development Accelerators and Advanced Dye Layering Technology, which allows the emulsion to capture and process light more effectively. This new film is no exception.

What do these breakthroughs mean for the cinematographer?

DISTANT: The result is that the emulsion can attain a similar speed at a much lower grain size. That means more creative flexibility and increased efficiency in real-world shooting situations. Cinematographers can rate the film at higher speeds and still expect excellent results. The additional detail and heightened signal-to-noise response in the highlights means cinematographers can follow the action into bright lit areas as they are able to extract more detail in overexposure areas in digital postproduction. They can also be less concerned about blown-out highlights.

Are there other benefits that will help cinematographers on the set?

DISTANT: Compared to our previous 200T film, this new VISION3 film will match the other members of the VISION3 family of films in terms of color and contrast. That ‘intercuttability,’ if you will, helps cinematographers lend a consistent look to a movie in a wide variety of shooting situations and exposure conditions. Also, in the past, cinematographers have depended on our 200T film stocks for critical bluescreen and greenscreen image capture situations. Our mid-speed, tungsten-balanced films are preferred because of their lower granularity position compared to higher speed films. The new KODAK VISION3 200T 5213/7213 film will continue the rich tradition of performing superbly in bluescreen and greenscreen situations, maintaining lower granularity with excellent sharpness and edge resolution in digital compositing.

How will these new films work with the latest scanners and other digital postproduction technology?

DISTANT: Whether transferring on a telecine or scanning for digital intermediate applications, customers should realize improved results compared to our previous tungsten-balanced, medium-speed stock. The new film greatly facilitates the extraction of additional information from both the shadows and highlights without the risk of image artifacts. This improvement is due to the more linear tone scale, the higher signal-to-noise response in both the shadow and highlight regions, and the resolution qualities of the film.

What’s your take on the future of film technology?

DISTANT: The ongoing innovation behind the VISION3 films shows that Kodak continues to raise the bar as far as image capture. Our research scientists are continuing to innovate and provide new features that are beneficial to our customers – both filmmakers and postproduction professionals.

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