

FUJICOLOR NEGATIVE FILM
***REALA* 500D**

35mm Type 8592 / 16mm Type 8692





The World's First Motion Picture Film to Incorporate Fujifilm's 4th Color Layer

The growing use of HMI lighting means ever greater performance demands for daylight balanced film. Fujicolor leads the way, with the development of REALA 500D high-speed (E.I. 500) daylight-type motion picture film. As the world's first to feature the 4th Color Layer that revolutionized the performance of Fujifilm's still films, REALA 500D sets new standards of cinematographic quality for daylight-type motion picture film.

New

FUJICOLOR
NEGATIVE FILM

REALA 500D



SUPER F
SERIES

The world's first high-speed (E.I. 500) daylight-type motion picture film

This revolutionary new film is exceptionally versatile. Effective for shooting productions that make heavy use of HMI lighting, its high sensitivity to light also makes it suitable for high-speed (slow motion) cinematography and for use with stopped-down zoom lenses. It also excels in underwater shoots. Despite its high speed, REALA 500D ensures superb image quality by minimizing burned-out highlights and blocked shadows.

4th Color Layer for natural, faithful color reproduction

REALA 500D is the world's first motion picture film to use Fujifilm's exclusive 4th Color Layer emulsion technology. The addition of a color-sensitive layer ensures faithful reproduction of color as it appears to the human eye. Even such difficult-to-reproduce colors as violet are faithfully rendered. The subtle shades of green in natural foliage are reproduced accurately, giving filmed images a natural depth and dimension.

Smooth, lifelike skin-tones

Delicate skin tones are captured beautifully, without sacrificing texture. Highlights are natural and dark areas show no reddish tones. Skin tones are rendered naturally and subtly under a wide variety of filming conditions.

Outstanding performance in mixed lighting

REALA 500D performs exceptionally under mixed lighting. When shooting interiors by a window under fluorescent lighting or using mercury vapor lights, the resulting images are virtually free of any greenish cast. This versatility minimizes the need for special filters and extra shooting preparations.

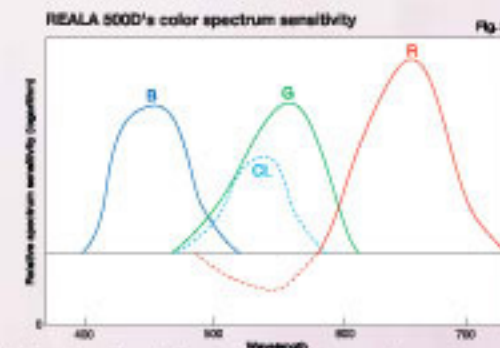
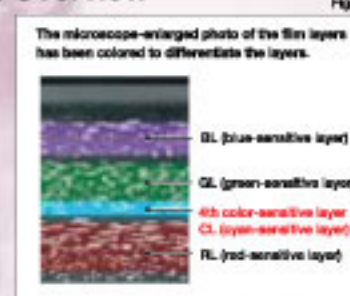
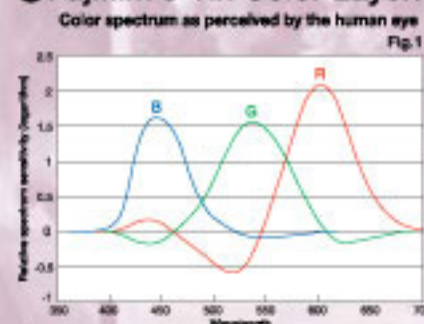
Excellent telecine transfer characteristics for high-quality video

REALA 500D's high speed means it captures even shadow information with great subtlety and detail. This makes it ideal for conversion into digital image data. New Fujicolor REALA 500D also features smooth transitions from highlights to shadows. The result is high-quality, high-resolution digital image data.

Sharp, fine-grain texture

Despite its E.I. 500 speed, REALA 500D delivers smooth, fine-textured grain, thanks to Fujifilm's proprietary emulsion technology. Excellent sharpness ensures high image quality under a wide variety of shooting conditions.

Fujifilm's 4th Color Layer: An Overview



As shown in Fig. 1, the color spectrum perceived by the human eye includes negative areas with reduced sensitivity. To faithfully reproduce color as perceived by the human eye, including these negative areas, a fourth color-sensitive layer was inserted between the green and red layers as shown by Fig. 2. As indicated by Fig. 3, the newly added CL layer artificially mimics the negative sensitivity areas of the human eye, enabling the film to approximate the human color sensitivity spectrum. As a result, the reproduction of the color green is improved. Even purple, traditionally difficult to capture faithfully, is reproduced much closer to the original tone.

Fujifilm's 4th Color Layer is a breakthrough technology, that achieves faithful color reproduction at a level previously attainable with the conventional three color layer film structure.

Exposure Index

Daylight 500
3200K tungsten lamps 125 (with Fuji Light Balancing Filter LBB-12 or Kodak Daylight Filter No. 80A)
These numbers are appropriate for use with exposure meters marked for ISO/ASA speeds. It should be noted, however, that the recommended exposure index may not apply exactly due to differences in processing, the usage of exposure meters, or other conditions. For best results it is recommended that test exposures be made prior to use, referring to instructions for the exposure meter used.

Color balance

This film is color-balanced for exposure to daylight. For other light sources, use the conversion filters in the table below.

Light source	Filter	Exposure Index
Daylight (Sunlight + Skylight)	None	500
Tungsten light	Fuji Filter LBB-12 or Kodak Daylight Filter No.80A	125
Metal halide lamps (e.g., HMI)	None	500
Ordinary fluorescent lamps White light type	None	500
Daylight Type	None	500
Three-band Fluorescent Lamps White Daylight Type (5000K)	None	500

These filter recommendations should provide approximate color conversion. Final color correction should be made at the time of printing.

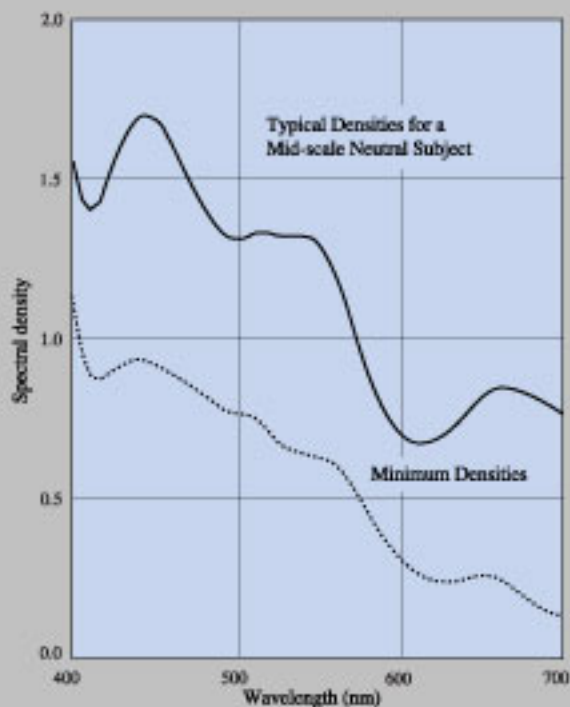
Reciprocity characteristics

No filter corrections nor exposure adjustments needed for shutter speeds of 1/1000 to 1/10 second. When exposure is 1 second, use 1/3 stop larger lens opening.

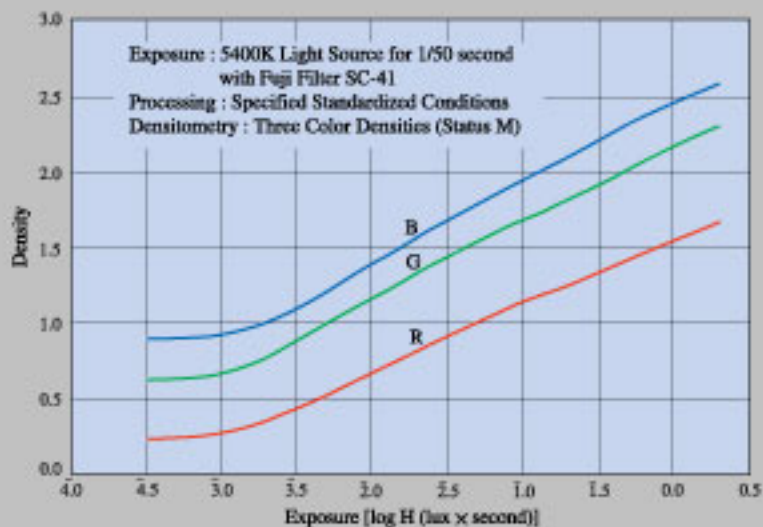
Edge markings

MR code system [key number, film identification mark (FN92), and machine-readable bar code for each; film name FUJI 500D, emulsion number, roll number, frame marks (4 perforations apart for 35mm film, no frame marks for 16mm film), etc.] is printed as latent images.

Spectral density curves

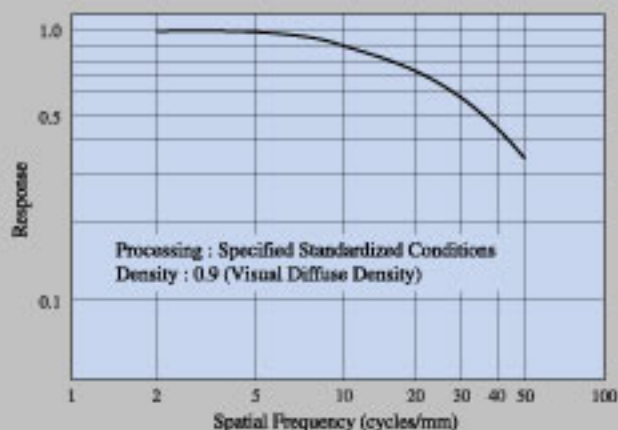


Characteristic curves



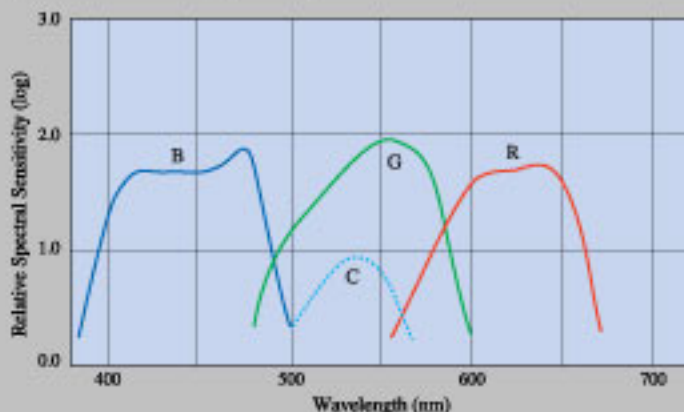
In order to simulate conditions closest to practical use, exposure was made under a 5400K light source, through a Fuji SC-41 ultraviolet absorbing filter. Processing was carried out under standard conditions and the three color densities (status M) were measured. The results of measurements are plotted as characteristic curves.

Contrast transfer function*



* Spatial frequency attenuation characteristic of amplitude relative to rectangular wave chart. (Presented data is normalized with the amplitude of a zero frequency.)

Spectral sensitivity curves



Processing : Specified Standardized Conditions

Densitometry : Arbitrary Three Color Densities

Density : 0.40 above Minimum Density

Sensitivity : Reciprocal of Exposure (ergs/cm²) Required to Produce Specified Density

RMS granularity

4.0 (1000 times the data obtained from the measurement taken at a visual diffuse density 1.0 above the minimum density; a 48μm diameter aperture used)

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FUJI PHOTO FILM CO., LTD.

26-30, NISHIAZABU 2-CHOME, MINATO-KU, TOKYO 106-8620, JAPAN