FUJICHROME Digital Output Film [DOF]

1. FEATURES AND USES

FUJICHROME Digital Output Film (DOF) is an ISO 100 color reversal film designed for use in digital film recorders.
It boasts excellent gradation, faithful color reproduction, high resistance to flare, and is ideal for use with laser-beam recorders, and also suitable for xenon and halogen light-based recorders and tube surface-type imaging equipment. This film's characteristic flexibility allows it to be used in a wide range of applications.

Features	Results
• **Excellent Gradation**	• Unexcelled highlight-to-shadow gradation linearity and excellent response to film recorder output, making gray balance setup easy
• **Faithful Color Reproduction**	• Color reproduction of the highest fidelity, including delicate intermediate hues and brilliant primary colors
• **High Image Quality**	• Enhanced sharpness and extended fine-grain quality of digital transparencies
• **Excellent Resistance to Flare**	• Highly detailed definition through suppression of density loss and blurring of colors and image due to recorder-produced flare
• **E-6/CR-56* Processing**	• Can be processed in standard E-6 chemicals anywhere in the world as with other FUJICHROME films

*CR-56 is FUJIFILM's equivalent to the E-6 process.

2. FILM SIZES, EMULSION NUMBER, BASE MATERIAL AND THICKNESS

Sizes		Emulsion Number
Rolls	• 135 ..... 24-exp. • 35mm x 30.5m (100 ft.) • 9.5 in. x 125 ft.	#851 –
Sheets	• 4 x 5 in. (10.2 x 12.7cm) 10 sheets and 50 sheets • 8 x 10 in. (20.3 x 25.4cm) 10 sheets and 50 sheets	

NOTE Not all of the above sizes/formats are available in certain market areas.

Base Material ..... Cellulose Triacetate
Base Thickness ..... Rolls
135 : 127µm
9.5in. x 125ft. : 205µm
Sheets : 205µm

3. FILM HANDLING

- Expose film before the expiration date indicated on the film package and process promptly after exposure.
- Handle film in total darkness and do not touch emulsion surfaces. (The use of a safelight will cause fogging.)
- Once film packages are opened, expose the film quickly and have it processed as soon as possible.
- Under certain conditions, the X-ray equipment used to inspect carry-on baggage at airport terminals can cause film fogging. Repeated inspections can increase the likelihood of fogging, so both exposed and unexposed should be removed from baggage for manual inspection.
- Fogging may occur in hospitals, factories, laboratories and other locations using X-rays. Keep films away from radiation sources.

4. EXPOSURE

This film is designed for use with laser, CRT and tungsten-halogen light source film recorders. When used with equipment, for which there are no reference tables, output conditions should be set for ISO 100 film (FUJICHROME PROVIA 100, Sensia II 100 and similar films).
If it is necessary to adjust output conditions to match special requirements, please contact the recorder manufacturer.
This film is not appropriate for general photography.

5. FILM STORAGE

Unprocessed Film

- Storing exposed or unexposed film under high temperature and humidity conditions will cause adverse speed, color balance and physical property changes.
  Store film under the following conditions.
  - ○ Short-to-medium term Storage:
    Below 15°C (59°F) ..... (Refrigerator)
  - ○ Long-term Storage:
    Below 0°C (32°F) ..... (Freezer)
- Building supplies, materials used in newly manufactured furniture paints and bonding agents may produce noxious gases. Do not store film, lightproof boxes of film, loaded cameras or film holders under these conditions.
- Before use, allow films to stand at room-temperature; over 3 hours for refrigerated film, and over 6 hours for frozen film. Long rolls such as 100 feet (30.5m) will require additional time. Opening the package/box while film is cold may cause harmful condensation.

Processed Film

Exposure to light, high temperature and humidity can cause color changes in processed films. Therefore, place such films in mounts or sleeves and store in dark, dry, cool and well ventilated locations under the following conditions.

- ○ Medium term Storage:
  Below 25°C (77°F) at 30 to 60% RH
- ○ Long-term Storage:
  Below 10°C (50°F) at 30 to 50% RH

NOTE As with all color dyes, those used in this film will discolor or fade with time.

6. PROCESSING

Process in standard E-6, CR-56 or equivalent chemicals.

7. VIEWING LIGHT SOURCES

Use a standard viewer. Visual responses will differ with light source quality and brightness. Therefore, employ a viewer which meets the ISO/ANSI standard.

* The ISO standard (ISO/DP3664-2) specifies an illuminated viewer surface with a color temperature derived from a CIE illuminant D50 (D: Daylight) with a reciprocal color temperature of 5000K, an average brightness of 1400cd/m²±300cd/m², a brightness uniformity of more than 75%, a light diffusion level of more than 90% and average color rendition assessment value of more than Ra90. Transparency viewers should meet these standards.

8. PRINTS AND DUPLICATES

Processed transparencies can be made into prints using FUJICHROME papers or FUJICOLOR Internegative Film IT-N, thus greatly increasing its versatility. High-quality duplicates can be made on FUJICHROME DUPLICATING FILM CDU Ⅱ.

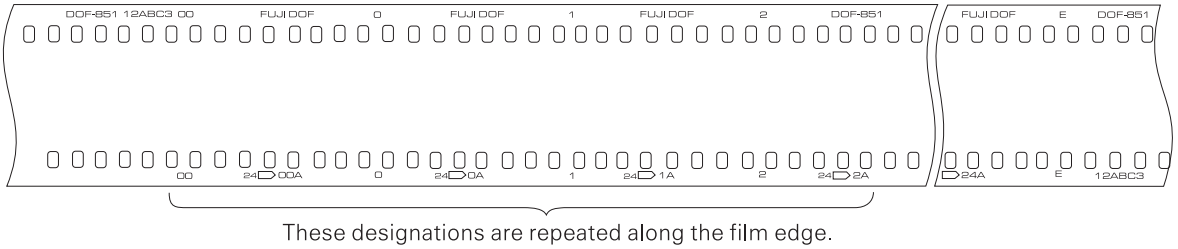
9. SHEET FILM CODE NOTCHING

A notch code to identify this emulsion type is located in the upper right-hand corner of the vertical sheet with the emulsion surface facing toward you.

10. PROCESSED FILM EDGE MARKINGS*

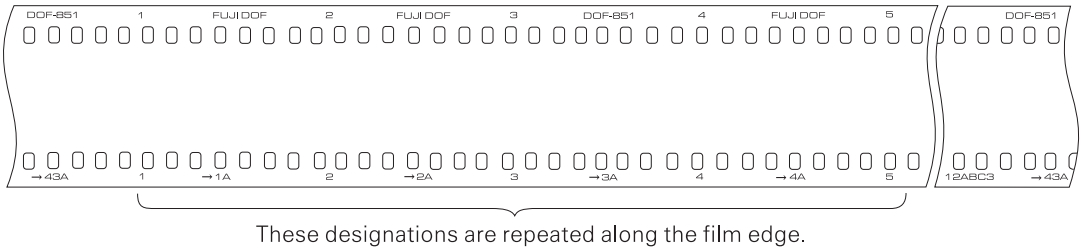
<Rolls>

· 135 Size



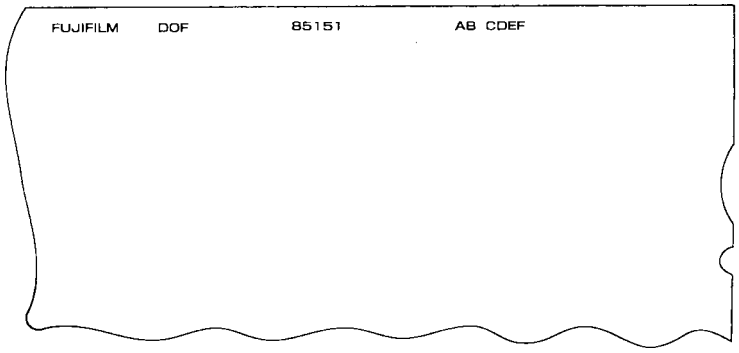
These designations are repeated along the film edge.

· 35mm x 30.5m (100 ft.)



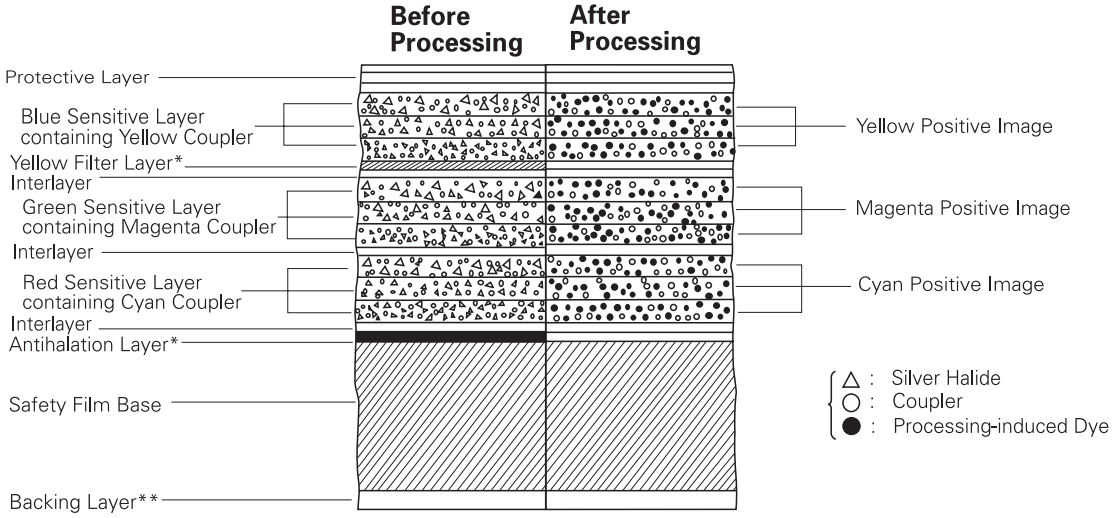
<Sheets>

· Sheet Size



* The emulsion is on the opposite side.
(Base side facing you)

11. FILM STRUCTURE



* These layers become colorless and transparent after processing.
** The backing layer is colorless and transparent both before and after processing, but it is not provided with 135 size film.

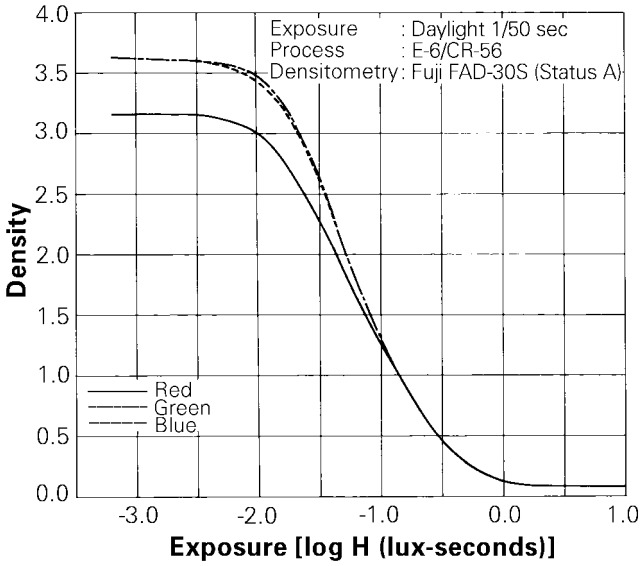
12. DIFFUSE RMS GRANULARITY VALUE 10

Micro-densitometer Measurement Aperture: 48 μm in diameter.
Sample Density: 1.0 above minimum density

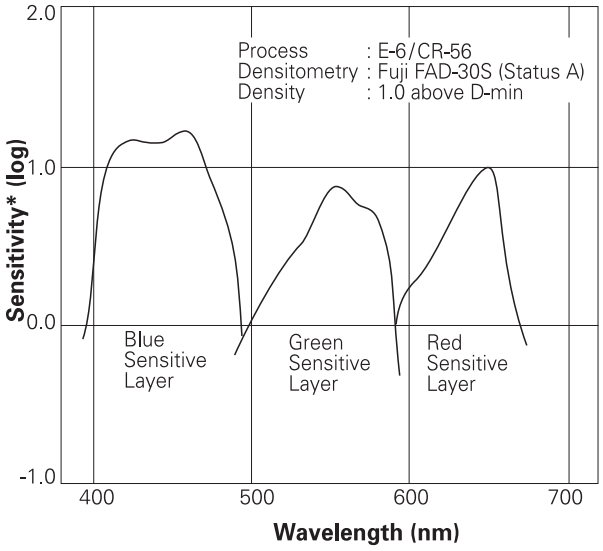
13. RESOLVING POWER

Chart Contrast 1.6 : 1 ..... **50** lines/mm
Chart Contrast 1000 : 1 ..... **130** lines/mm

14. CHARACTERISTIC CURVES

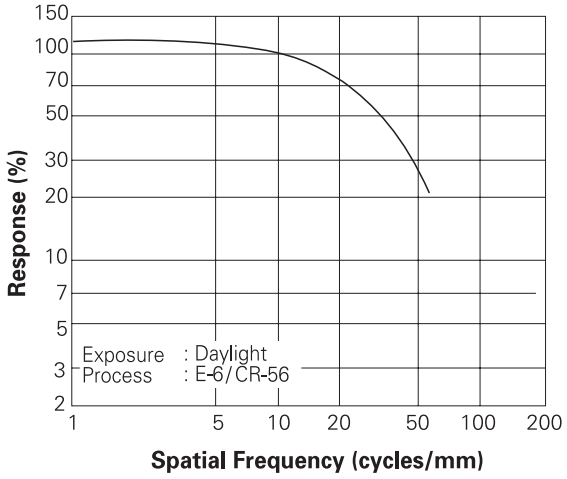


15. SPECTRAL SENSITIVITY CURVES

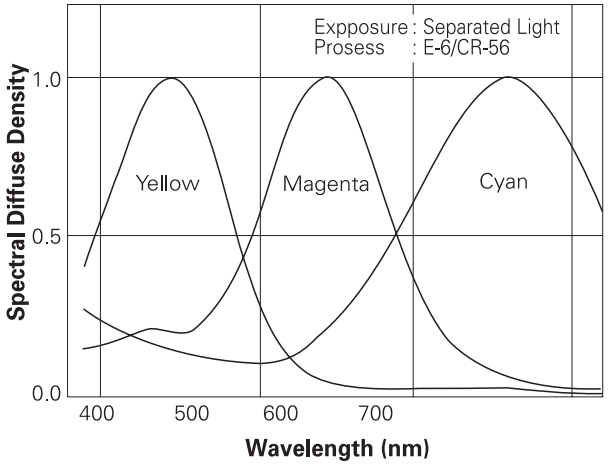


* Sensitivity equals the reciprocal of the exposure (ergs/cm²) required to produce a specified density.

16. MTF CURVE



17. SPECTRAL DYE DENSITY CURVES



NOTICE The data herein published were derived from materials taken from general production runs. However, as Fujifilm is constantly upgrading the quality of its products, changes in specifications may occur without notice.

FUJIFILM
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Ref. No. **AF3-987E** (EIGI-98.1-HB•5-3❷) Printed in Japan