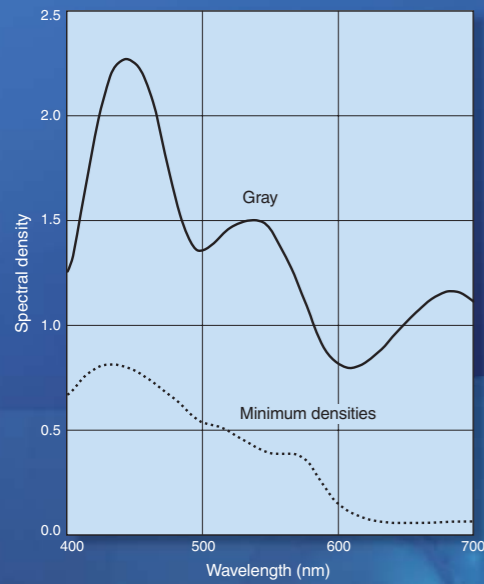
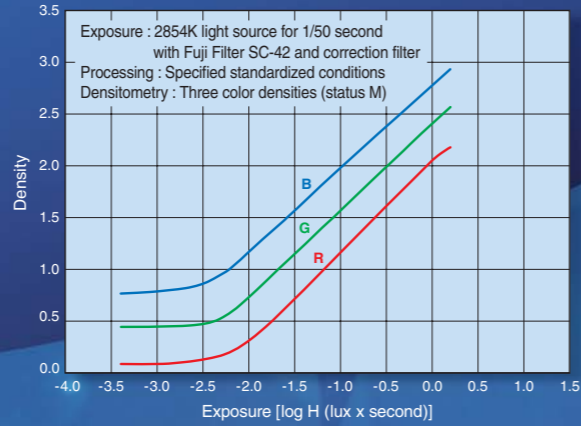


Spectral density curves

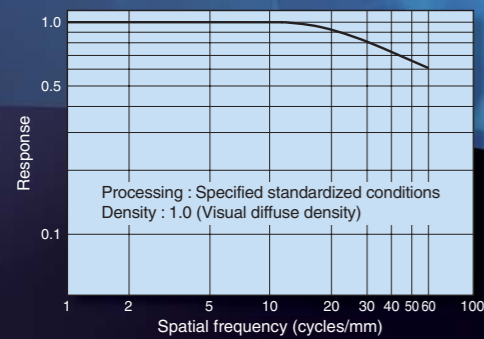


Characteristic curves



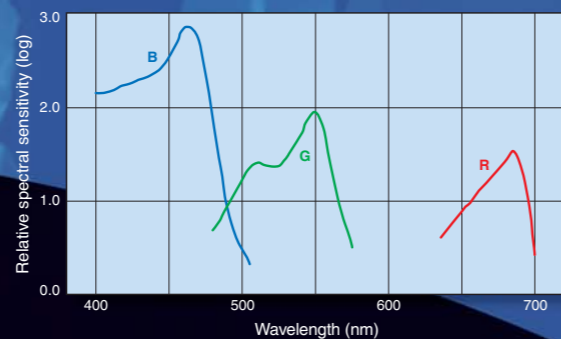
In order to simulate conditions closest to practical use, exposure was made under a 2854K light source, through a Fuji SC-42 ultraviolet absorbing filter as well as a correction filter which corresponds to the color negative film mask. Processing was carried out under standard conditions and the three color densities (status M) were measured. The results of measurements are plotted as characteristic curves here.

Contrast transfer function*



* Spatial frequency attenuation characteristic or amplitude relative to rectangular wave chart. (It should be noted, however, that the data presented was normalized with the amplitude of zero frequency.)

Spectral sensitivity curves



Processing : Specified standardized conditions
 Densitometry : Arbitrary three color densities
 Density : 1.0 above minimum density
 Sensitivity : Reciprocal of exposure (ergs/cm²) required to produce specified density



FUJICOLOR INTERMEDIATE FILM

ETERNA

35mm Type 8503/4503 (PET) / 16mm Type 8603

-CI

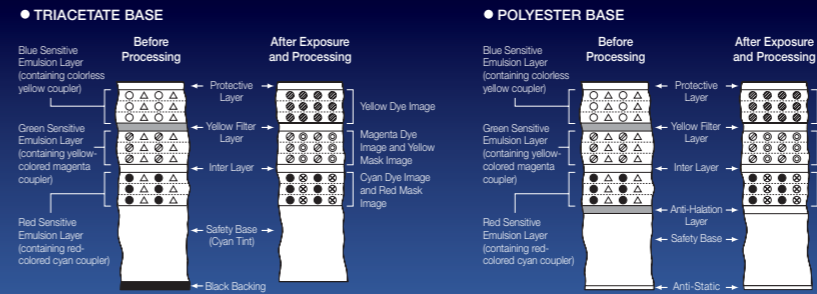
General Properties

Fujicolor Intermediate Film ETERNA-CI is a high-definition, ultra-fine grain intermediate stock designed for making color master positives by printing from original negatives or making duplicate negatives by printing master positives on ETERNA-CI material. This intermediate stock is designed with special emphasis on exact reproduction of the gradation, color balance and sharpness of originals. In addition, the speed balance of all the emulsion layers is designed to provide optimum results when making prints from color-mask incorporated color negatives or other color duplicating films.

Film Structure

Three emulsion layers which are respectively sensitive to red, green, and blue light are coated on a safety base together with yellow filter, protective, and other layers, and each emulsion layer is again a stack of three emulsion layers designed to achieve extremely fine grain and a full range of tones. The emulsion layers which contain various ingredients required to record an image,

such as light-capturing silver halides and dye-forming couplers, form dye images and an orange-colored mask image when exposed to light and processed. This color mask image plays an important role in making color release prints of excellent color reproduction. There is an anti-halation layer provided between the base and the emulsion layers, and a black backing layer is provided on the other side of the film base to provide anti-halation, anti-static, and anti-scratch properties and surface lubrication. This backing is removed during processing (TRIACETATE BASE Type 8503/8603). The durable polyester film base is backed with a transparent anti-static layer that eliminates static buildup and minimizes adhesion of dust particles, enhancing printability and consistently producing clean, sharp prints. This property is still effective even after processing (POLYESTER BASE TYPE 4503). The film structure is schematically represented on the right side



The other side of the base is provided with a transparent antistatic layer to provide such properties as static electricity control and scratch resistance. This layer serves to prevent the occurrence of static arcs and the collection of dust due to static electricity. This property is still effective even after processing. The film structure is schematically represented above.

Superbly natural color and tonal reproduction for outstanding cinematic impact.

FUJICOLOR INTERMEDIATE FILM

ETERNA-CI

35mm Type 8503/4503 (PET) / 16mm Type 8603



Film Base Safelight

Clear safety base (TAC) or polyester base (PET) is used. This film should be handled in total darkness or under safelight conditions. In the latter case a Fuji Safelight Filter No.4 or a Kodak Safelight Filter No.3 (both are dark green) should be used in combination with a 10-watt light, keeping the film at a distance of 1m or more from it. This film can also be handled under the same safelight conditions that are essential to color positive film in which case a Fuji Safelight Filter No. 101A or Kodak Safelight Filter No.8 (both are dark orange) should be used. If the film is to be exposed to these safelight conditions for extended periods, sufficient safety factor testing should be carried out before using the film.

Printing

In master position production, contact printers are usually employed. In the interest of image stability, however, it is desirable that a step contact printer be used. For duplicate negative production an optical printer can be used. In this case it is desirable to use an optical printer in conjunction with a wet gate projector to inhibit graininess deterioration due to the matting agent on the emulsion surface. Insert an ultraviolet absorbing filter (Fuji Filter SC-42 or Kodak Wratten Filter No.2E) and a heat-absorbing filter (Fuji Filter No.2043) in the light beam of the printer.

Aim Density in Printing

This film is designed to allow the same printing aim density for both master positives and duplicate negatives. Adjust the density settings on the printer so that the following density values (status M densitometry) may be obtained when a color negative of an 18% reflectance gray patch is appropriately exposed and processed under standard conditions.

Red Density	Dmin +1.0 ±0.1
Green Density	Dmin +1.0 ±0.1
Blue Density	Dmin +1.0 ±0.1

Reciprocity Characteristics

This film is designed so that there is no need to adjust exposure or color balance with 1/200 to 1 second exposure times.

[Packaging Units and Perforations]

Film Width	Film Length and Winding Type	Core / Spool	Shape, Pitch and Specification of Perforations
35mm	305m (Cellulose triacetate base)	35 x 50 mm core	N-4.740 mm (Negative perforations with short pitch) [ISO 491 : 1988]
	305m (Polyester base)	35 x 50 mm core	
	610m (Cellulose triacetate base)	35 x 75 mm core	
	610m (Polyester base)	35 x 75 mm core	
16mm (Cellulose triacetate base)	*305m x 2 (Single-perforated, type A winding)	16 x 50 mm core	1R-7.605 mm (Single perforations with short pitch) 2R-7.605 mm (Double perforations with short pitch) [ISO 69 : 1972]
	*305m x 2 (Single-perforated, type B winding)	16 x 50 mm core	
	*305m x 2 (Double-perforated)	16 x 50 mm core	
	*610m x 2 (Single-perforated, type A winding)	16 x 75 mm core	
	*610m x 2 (Single-perforated, type B winding)	16 x 75 mm core	
	*610m x 2 (Double-perforated)	16 x 75 mm core	

Items marked with * are supplied on a special order basis.

Processing

This film is to be processed with Process ECN-2 and formulas published by Eastman Kodak for Eastman Color Negative Film. In the bleaching step, persulfate bleach, ferricyanide bleach or PDTA-ferric bleach (UL bleach) is used.

Edge Markings

The MR. CODE system [key number, film identification code (FI 03), machine-readable bar code, film name (FUJI FCI), emulsion number, roll number, frame marks (4 perforations apart for 35mm stock, no frame mark for 16mm stock) etc.] is printed as latent images.

Raw Stock Storage

Like other color films, Fujicolor Intermediate Film ETERNA-CI Types may undergo certain changes in photographic properties during storage. Since these changes can be accelerated by heat and moisture in particular, it is recommended that raw stock be stored unpacked at temperatures below 10°C (50°F). Any package that has been taken out of cold storage should remain sealed until it reaches equilibrium with ambient temperature. If packages are opened too soon, moisture condensation on the film surfaces may occur.

Exposed Film Handling

Exposed films should preferably be processed as soon as possible. If exposed films cannot be processed within three days of exposure, they should be stored at temperatures below 10°C (50°F) and processed as soon as circumstances permit.

Processed Film Storage

Fujicolor Intermediate Film ETERNA-CI Types are designed to resist color fading, but high temperatures and humidities accelerate changes in dye image quality. These conditions may also accelerate film base deterioration. To avoid such changes, processed films should be kept at a temperature of 15°C (59°F) with 30% to 40% RH for long-term storage (about 100 years), and at temperature of 20°C (68°F) with 40% to 50% RH for medium-term storage (about 50 years). In addition, it is recommended that processed films in storage be checked by visual inspection for changes (e.g., deformation, color fading, adhesion, mold) and by smelling for odor of acetic acid at intervals of a few years.