

# FUJITRANS CRYSTAL ARCHIVE DISPLAY MATERIAL

## 1. FEATURES AND USES

FUJITRANS CRYSTAL ARCHIVE DISPLAY MATERIAL is film designed for the production of color transparency displays. It enables a variety of exposure methods to be used – from contact or normal enlargement printing using internegatives or color negatives, to fast, digital image exposure by laser light. This film is suitable as a large-sized color medium for advertising and display work.

Features	Results
<ul style="list-style-type: none"> <li>• <b>Superb Reciprocity Characteristics (High Suitability for Digital Image Exposure)</b></li> </ul>	<ul style="list-style-type: none"> <li>• Minimal changes in sensitivity and gradation regardless of exposure either by tungsten or laser light sources.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Rich Gradation and Well-controlled Gray Balance</b></li> </ul>	<ul style="list-style-type: none"> <li>• Smooth and natural gradation reproduction, from the highlights to the shadows, as well as neutral grays over the entire density range.</li> <li>• Maximum density, along with distinct reproduction of shadow details, even when exposed quickly by laser or other strong light sources.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Vibrant Color Reproduction</b></li> </ul>	<ul style="list-style-type: none"> <li>• More faithful and vibrant color reproduction of greens, blues, and yellows, for high color saturation essential to display materials.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Highest Level of Color Image Stability</b></li> </ul>	<ul style="list-style-type: none"> <li>• True-color images with minimal reduction in image density even in long-term displays under the most severe conditions.</li> </ul>

## 2. BASE MATERIAL AND THICKNESS

PET base: about 180 μm (7 mil.)

## 3. SAFELIGHT

For an extra margin of safety this film should be handled in total darkness. If the use of a safelight is unavoidable, to ensure no film fogging results, refer to the following.

- The recommended safelight filter is the Kodak Safelight Filter No. 13 (or Fuji Safelight Filter No. 103A). Use this filter in conjunction with a 10 watt tungsten lamp. Be sure also to work at least 1 m from the safelight and to finish printing within 1 minute.
- Safelight filters tend to fade with extended use and need regular checking. Replace when film fogging is detected.
- Since exposed film is easily subjected to safelight-induced sensitivity increase in exposed areas, be sure that handling precautions are taken.

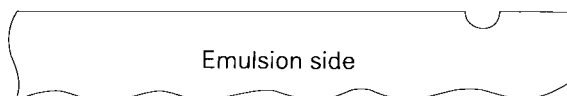
## 4. RAW FILM STORAGE

This film is subject to deterioration in photographic performance and finished quality when stored for a long time under high-temperature and high-humidity conditions, even if used before the indicated expiration date. For this reason, always store raw film in a cool, dark place at a temperature of 10°C (50°F) or less.

## 5. FILM HANDLING

Because the film is easily marked by fingerprints or stained by contaminants, always wash your hands thoroughly, or put on clean cotton gloves before handling the film.

The film sheets are encoded with a notch, which is located in the upper right-hand corner when the emulsion surface is facing toward you.



**6. PRE-EXPOSURE HANDLING**

Raw film which has been stored at 10°C (50°F) or less should be kept in its moisture-proof wrap and allowed to warm to room temperature prior to being opened. If the film is removed from its packaging immediately after being removed from refrigerated storage, condensation will form on the surfaces, resulting in print color change and easily damaged surfaces. The shortest periods required to return freezer or refrigerator-stored film to room temperature (minimum temperature equalization periods) are as follows.

**20°C (68°F) Temperature Equalization Periods**

Unit: Hours

Storage Temperature Film Size	Storage Temperature		
	-20°C (-4°F)	0°C (32°F)	10°C (50°F)
127cm × 30m (50in. × 100ft)	7	6	4 ½
50.8cm × 61.0cm(20in. × 24in.)	5	4	2 ½

- NOTES**
- Do not heat film to speed up temperature equalization.
  - Remove the entire quantity of film to be used on any day from refrigeration during the previous day.

**7. POST-EXPOSURE, PRE-PROCESSING HANDLING**

This film has enhanced post-exposure latent image stability. However, if the latent image remains unprocessed for extended periods of time under normal room conditions or is subjected to high temperatures or humidity, changes in the image and color balance may occur.

- The time between exposure and development should be fixed for purposes of uniform quality. Rather than holding exposed film for processing the next day, initiate processing as soon as possible.

**8. PROCESSING**

Optimum performance is derived with any equipment using Proces RA-4RT. With this process, the time for both color development and bleach-fix is 110 seconds. Processing steps are as indicated in the following table.

**RA-4RT**

Processing Steps	Processing Conditions				
	Time (sec.)	Temperature		Basic Replenishment Rate	
		°C	°F	ml/m <sup>2</sup>	ml/ft <sup>2</sup>
Color Developer	110	35±0.3	95.0±0.5	495*	46.0
Bleach-Fix	110	30 to 36	86 to 97	495	46.0
Wash	220	30 to 40	86 to 104	—	—
Dry	as needed	50 to 70	122 to 158	—	—

- \* If the processing solution replacement ratio (processor utilization) is low, it may be necessary to increase replenishment rates. For example, if the solution replacement ratio is between 4 and 7%, the replenishment rate should be 581 ml/m<sup>2</sup> (54 ml/ft<sup>2</sup>). If it is less than 4% the replenishment rate should be 861 ml/m<sup>2</sup> (80 ml/ft<sup>2</sup>).

**9. RETOUCHING**

This film can be retouched on both its emulsion side and its base side with either retouching pencils or retouching dyes manufactured for this purpose.

**10. RECOMMENDED LIGHT SOURCE**

As the light source for finished display material, fluorescent lamps are generally the most practical. To produce the best results, however, use only high-quality fluorescent lamps with good color-rendering qualities.

**11. FILM SIZES****• Sheets**

Size	Sheets/box		
	10	20	50
20.3cm × 25.4cm (8in. × 10in.)			•
27.9cm × 35.6cm(11in. × 14in.)			•
40.6cm × 50.8cm(16in. × 20in.)		•	•
50.8cm × 61.0cm(20in. × 24in.)		•	
76.2cm × 101.6cm(30in. × 40in.)	•		

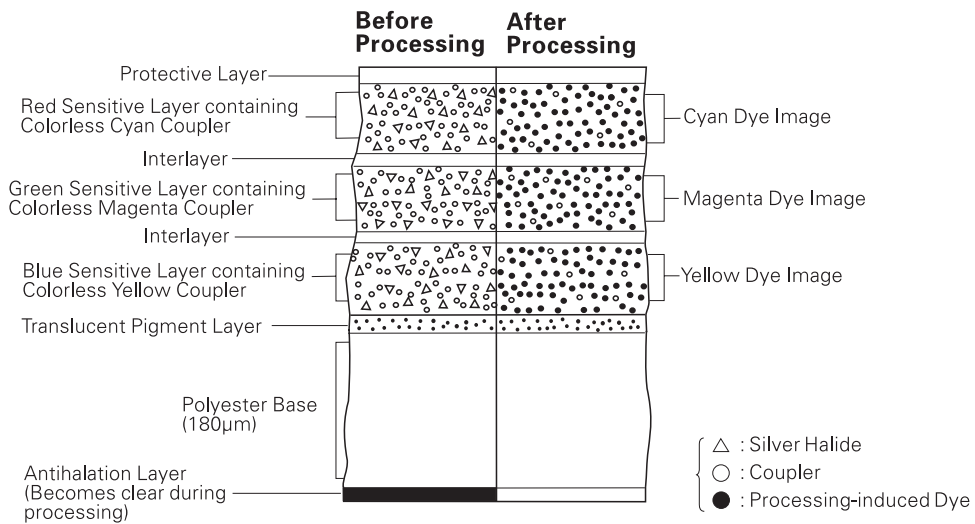
- NOTE** Size availability is open to change.

• **Rolls**

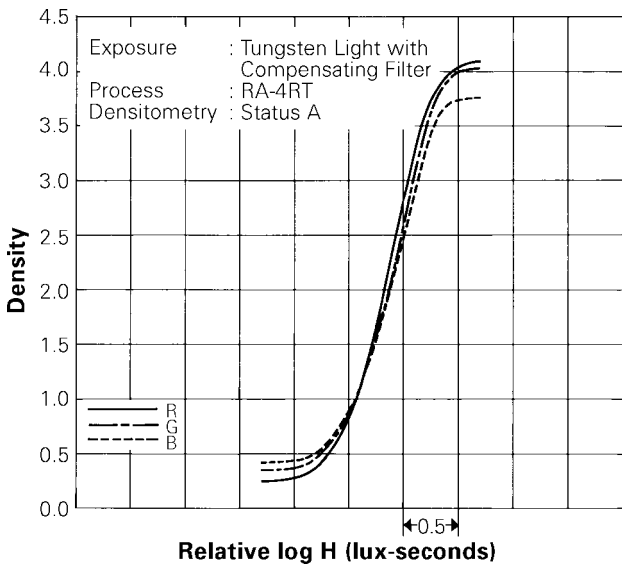
Width \ Length	30.5 cm (100 ft)	61 m (200 ft)
27.9 cm (11 in)		
40.6 cm (16 in)	▷	
50.8 cm (20 in)	▷	
61 cm (24 in)	▷	
76.2 cm (30 in)	▷	
101.6 cm (40 in)	▷	
112 cm (44 in)	▷	
127 cm (50 in)	▷	

**NOTE** Size availability is open to change.

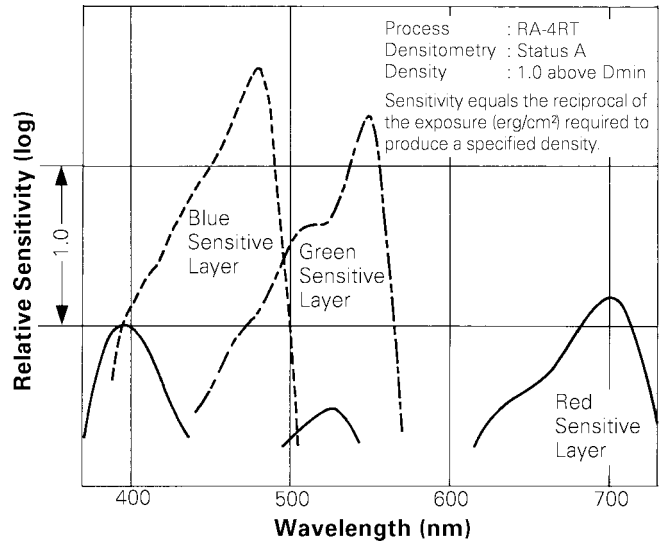
**12. FILM STRUCTURE**



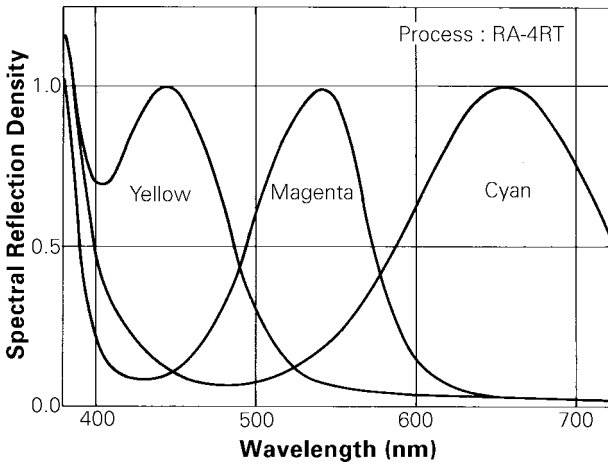
**13. CHARACTERISTIC CURVES**



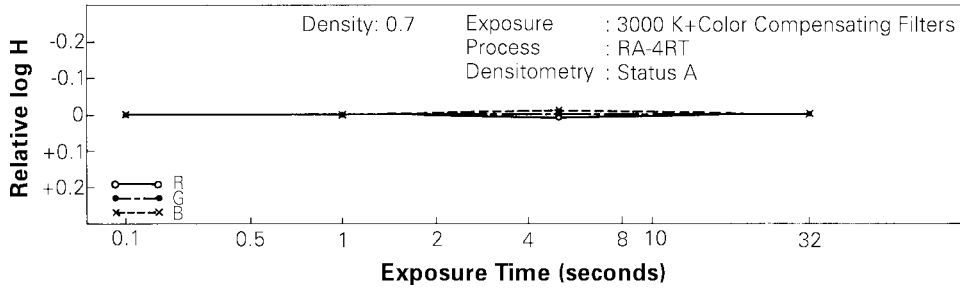
**14. SPECTRAL SENSITIVITY CURVES**



**15. SPECTRAL DYE DENSITY CURVES**

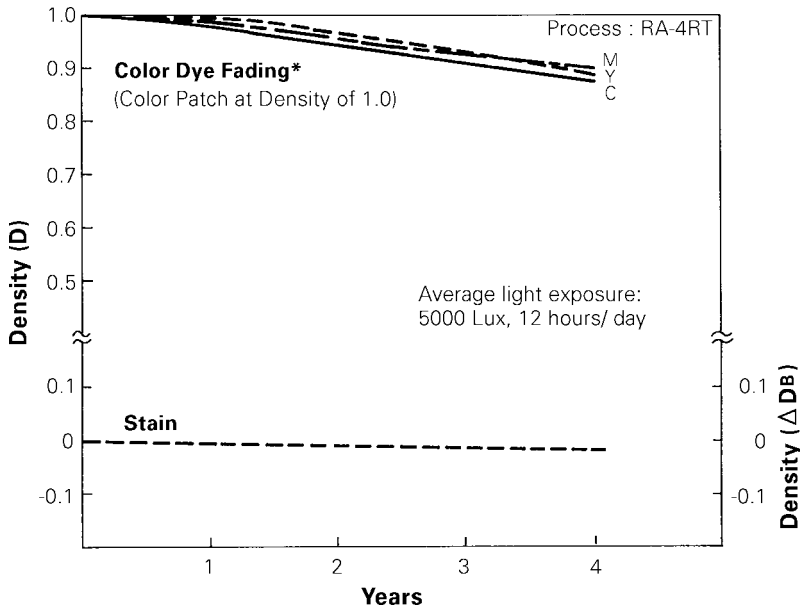


**16. RECIPROCITY CHARACTERISTICS**



**17. IMAGE STORAGE CHARACTERISTICS**

- **Estimated Light Storage Stability under 5000 Lux Intermittent Illumination conditions**



\* Time-lapse-induce white background staining (yellowing) is as important as dye image fading in affecting image quality. Therefore, dye image fading and yellowing data are also included.

**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.