

# FUJICHROME Sensia II 100 [RA]

## 1 FEATURES AND USES

FUJICHROME Sensia II 100 [RA] is an ISO 100. high-image-quality daylight color reversal film.

Features of this film include beautiful skin tones, natural and true-to-life color reproduction, and smooth textural depiction. Its high color-temperature tolerance during exposure makes it easily and widely applicable for slide production not only for snapshots, scenery, and other general photography, but also for medicine-, science-, and industry-related photography.

This film can also be used in conjunction with FUJICHROME PAPERS and internegative films to produce color prints.

Features	Results
<ul style="list-style-type: none"> <li>• <b>Natural and Faithful Color Reproduction</b></li> </ul>	<ul style="list-style-type: none"> <li>• Always provides accurate and pleasant colors from delicate hues to vibrant colors.</li> <li>• Also reproduces a variety of skin tones beautifully and faithfully.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Rich Tone Reproduction</b></li> </ul>	<ul style="list-style-type: none"> <li>• Delivers full detail in high-light to mid-tone area.</li> <li>• Produces excellent three dimensional depth with crisp yet natural whites and deep blacks.</li> <li>• Provides optimum performance for projection.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Unsurpassed Color Temperature Tolerance</b></li> </ul>	<ul style="list-style-type: none"> <li>• Almost no bluish color cast in the shade area.</li> <li>• Minimized color balance shift under various lighting situations.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Excellent Unexposed-Film Stability</b></li> </ul>	<ul style="list-style-type: none"> <li>• Highly resistant to speed, color balance or gradation changes during storage.</li> <li>• Provides consistent high quality image at all times.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>E-6/CR-56 Processing</b></li> </ul>	<ul style="list-style-type: none"> <li>• Can be processed worldwide as with other FUJICHROME films.</li> </ul>

In addition to these features, this film has the same high color-image stability and image characteristics of FUJICHROME Sensia 100 (RD).

## 2 SPEEDS

Light Source	Speed	Filter
Daylight	ISO 100/21°	None
Tungsten Lamps (3200K)	ISO 32/16°	No. 80A**(LBB-12***)

\* Indicates the effective speed resulting from designated filter use.

\*\* Kodak Filter

\*\*\* Fuji Light Balancing Filter

## 3 FILM SIZES, EMULSION NUMBER, BASE MATERIAL AND THICKNESS

Sizes		Emulsion Number
Rolls	135 ..... 24 and 36-exp.	651 -

Base Material ..... Cellulose Triacetate

Base Thickness ..... 127 μm

## 4 EXPOSURE GUIDE AND EXPOSURE UNDER VARIOUS LIGHT CONDITIONS

Use a meter for exposure determination. If a meter is not available refer to the following table.

Light Conditions	Seashore or Snow Scenes under Bright Sun	Bright Sunlight	Hazy Sunlight	Cloudy Bright	Cloudy Day or Open Shade
Lens Aperture	f/16	f/11	f/8	f/5.6	f/4

(Exposure Time 1/250th Sec.)

### NOTES

- The foregoing settings are for 2 hours after sunrise and 2 hours before sunset.
- Provide lens opening 1/2 stop smaller during the summer and 1/2 stop larger during the winter.
- Excessively bright (or dark) or backlighted subjects may require plus or minus 1 stop lens opening adjustments.

**Daylight**

Under daylight conditions, color balancing filters are not necessary, but the following exposure conditions may require the indicated filters.

Subject Conditions	Filter	Exposure Correction
Fair weather open shade and shaded landscapes.	UV Filter or No. 2C* (SC-39 or SC-40)**	None
Bright distant scenes, snow landscapes, seaside scenes, aerial scenes and open landscapes.		
Close-ups of plants and subjects having bright colors.		

Excessively high or low subject color temperatures may require the following filter additions and exposure corrections.

Subject Conditions	Filter	Exposure Correction
<u>High Color Temperature:</u> Cloudy weather landscapes or portraits and clear weather open shade.	No. 81A* (LBA-2)***	+1/3 stop ****
<u>Low Color Temperature:</u> Morning and evening twilight scenes and portraits.	No. 82A* or No. 82C* (LBB-2 or LBB-4)***	+1/3 to +2/3 stop ****

- \* Kodak Filters
- \*\* Fuji Sharp-Cut Filter
- \*\*\* Fuji Light Balancing Filter
- \*\*\*\* "+" = Lens opening

**Electronic Flash**

- Since electronic flash characteristics are similar to daylight, no filters are required. Effective light output and color balance will differ with equipment type, age and other factors, requiring initial exposure tests.
- Adjust lens openings for electronic flash according to following formula.

$$\text{Lens Aperture (f-number)} = \frac{\text{ISO 100 Electronic Flash Guide Number}}{\text{Electronic Flash-to-Subject Distance (meters)}}$$

- Set the film speed at ISO 100. Since the amount of light reflected onto the subject from surrounding surfaces will differ with the conditions, refer to flash unit instructions.

**Photo-Reflector Lamps (Daylight Photoflood Lamps)**

- Daylight photoflood lamps tend to result in under-exposure, so it is sometimes essential to increase exposure light output beyond that indicated by an exposure meter.
- Color balance and light output will differ with lamp configuration, duration of use and applied voltage. It is essential that exposure conditions be determined in relation to the particular lighting equipment employed.

**Fluorescent Lamps**

- Color balance corrections should be made using the filter combinations suggested below because effective light intensity and color balance varies with lamp make and age.
- For exacting work, test exposures are recommended.

(Exposure Time: 1/4 second)

Fluorescent Lamp Type	White (W)	Daylight (D)	Cool White (CW)	Warm White (W.W)
<b>Color Compensating Filters*</b>	15M+20B	35R	30M	No.80B
<b>Exposure Corrections**</b>	+1 stop	+1 stop	+2/3 stop	+1 1/3 stops

- \* Kodak CC Filters (or Fuji Color Compensating Filters) recommended.
- \*\* Exposure correction values include filter exposure factors. These values are added to unfiltered exposure meter reading. "+" = Lens opening.

**NOTES** Use 1/30th or slower shutter speeds.

**Tungsten Lamps**

- A Kodak Filter No. 80A (or Fuji Light Balancing Filter LBB-12) is recommended with photoflood lamps. A 2 2/3 stop larger lens opening is also recommended.
- With household tungsten lamps, a Kodak Filter No. 82A (or Fuji Light Balancing Filter LBB-2) will compensate for inherent color temperatures lower than photoflood lamps. A 2 stop larger lens opening is recommended.

**Mixed Light Sources**

Under mixed light conditions, derive the basic filter configuration for the main light source.

**5 EXPOSURE PRECAUTIONS**

For artificial light sources such as electronic flash, photoflood lamps, fluorescent lamps, tungsten lamps, mercury lamps and the like, effective light output and color temperatures will vary with the type, the applied voltage and the age of the equipment. Also, light intensity or color temperature differences may be caused by variations in auxiliary lighting equipment such as reflectors and diffusers.

**6 FILM HANDLING**

- Expose film before the expiration date indicated on the film package and process promptly after exposure.
- When loading and unloading roll film avoid direct sunlight. If there is no shade, turning one's back toward the sun will shade the film.
- Under certain conditions, the X-ray equipment used to inspect carry-on baggage at airport terminals will adversely affect photographic film (cause fogging). The adverse effects of this are increased with the strength of the X-rays, the speed of the film, and the cumulative number of inspection exposures. Therefore, it is recommended that at each inspection the film be removed from the baggage and airport security personnel be asked to inspect the film manually.
- Film fogging may occur in hospitals, factories, laboratories and other locations using X-rays and other radiation sources.

**7 FILM STORAGE****Unprocessed Film**

- Storing exposed or unprocessed 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:**  
Avoid storing at places subject to high temperatures; if possible, store at below 15°C (59°F) ..... (Refrigerator)
  - **Long-term Storage:**  
Film should be ideally stored below 0°C (32°F) ..... (Freezer)
- Building supplies, newly manufactured furniture, paints and bonding agents may produce noxious gases. Do not store film, lighttight boxes with 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. Opening the container while film is cold may cause harmful condensation.

**Processed Film**

Light, high temperature and humidity 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.

**8 PROCESSING**

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

**9 VIEWING LIGHT SOURCES**

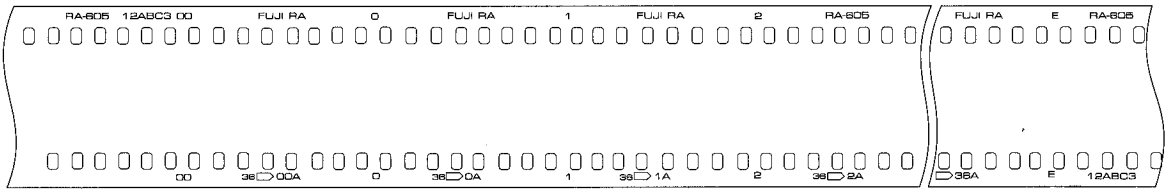
Use a standard viewer. Visual responses will differ with light source quality and brightness. Therefore, employ a viewer which meets the ISO/ANSI standards.

- \* 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 1400 cd/m<sup>2</sup> ± 300 cd/m<sup>2</sup>, a brightness uniformity of more than 75%, a light diffusion level of more than 90% and an average color rendition assessment value of more than Ra90. Transparency viewers should meet these standards.

**10 PRINTS AND DUPLICATES**

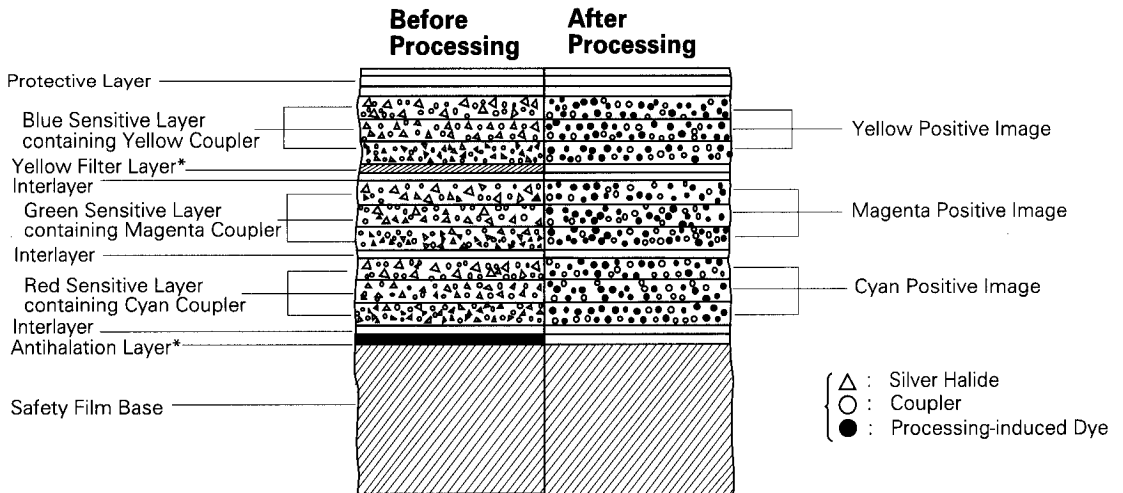
Processed transparencies can be made into prints on FUJICHROME PAPER or FUJICOLOR internegative film IT-N. Duplicates can be made on FUJICHROME DUPLICATING FILM CDU TYPE II.

**11 PROCESSED FILM EDGE MARKINGS\***



These designations are repeated along the film edge.

**12 FILM STRUCTURE**



\* These layers become colorless and transparent after processing.

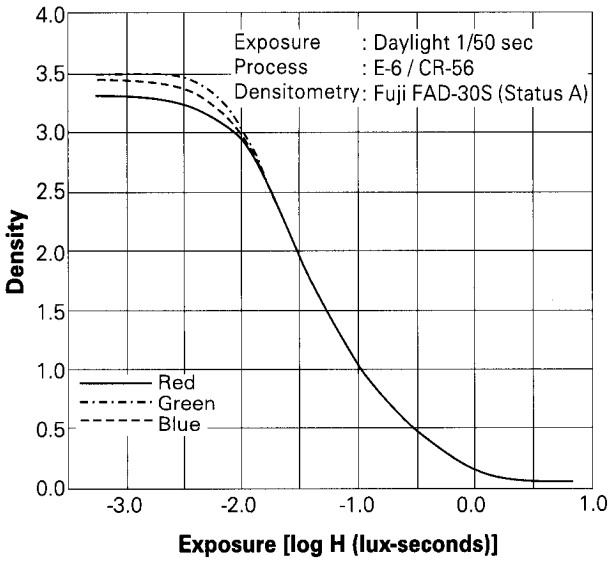
**13 DIFFUSE RMS GRANULARITY VALUE — 10**

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

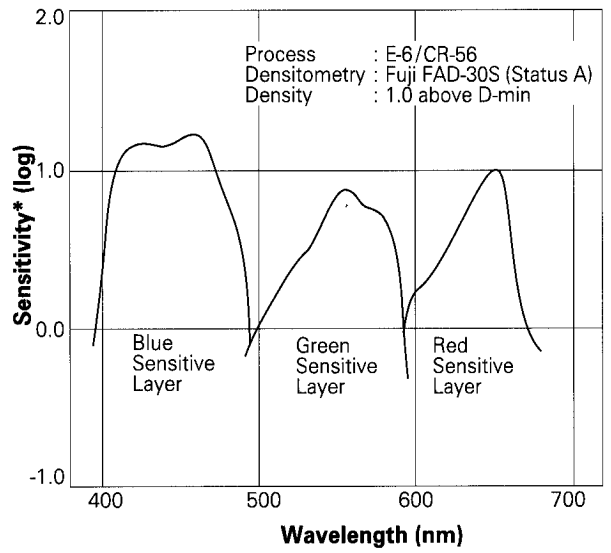
**14 RESOLVING POWER**

Chart Contrast 1.6 : 1 ..... **55 lines/mm**  
Chart Contrast 1000 : 1 ..... **135 lines/mm**

**15 CHARACTERISTIC CURVES**

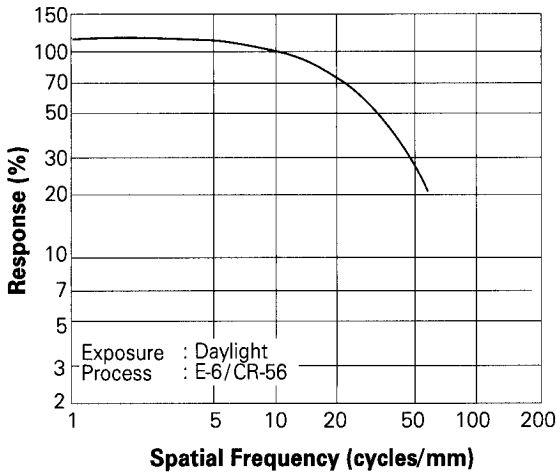


**16 SPECTRAL SENSITIVITY CURVES**

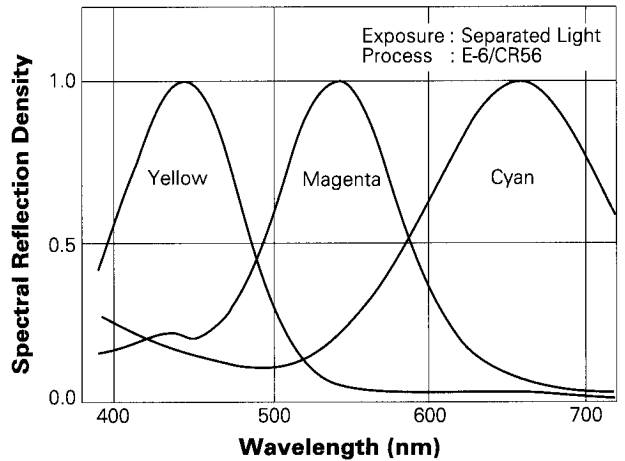


\* Sensitivity equals the reciprocal of the exposure (ergs/cm<sup>2</sup>) required to produce a specified density.

**17 MTF CURVE**



**18 SPECTRAL DYE DENSITY CURVES**



**NOTICE** The sensitometric curves and other data herein published were derived from particular materials taken from general production runs. As such they do not represent in exact duplication the characteristics of every lot produced nor a standard for Fujifilm products. Further, Fujifilm is in a constant process of upgrading quality which may result in data changes.