



NEW

FUJICOLOR nexia 400
(ADVANCED PHOTO SYSTEM FILM)

1. FEATURES AND USES

FUJICOLOR nexia 400 is an Advanced Photo System daylight color negative film with an ISO speed rating of 400. It adopts a PEN (polyethylene naphthalate) base for higher film durability. This film yields the best results when used in conjunction with FUJICOLOR papers.

Features	Results
<ul style="list-style-type: none"> Improved Grain Quality 	<ul style="list-style-type: none"> Very high level of grain quality among APS films with an ISO speed rating of 400
<ul style="list-style-type: none"> High Sharpness 	<ul style="list-style-type: none"> Extremely sharp depiction of all aspects of the subject, from overall form to textural details
<ul style="list-style-type: none"> Color Reproduction of Great Vividness 	<ul style="list-style-type: none"> Great vividness across the entire spectrum, including brilliant reds, bright blues and clear yellows
<ul style="list-style-type: none"> Accurate Color Reproduction 	<ul style="list-style-type: none"> True-to-life depictions of difficult-to-reproduce colors such as violet and various greens
<ul style="list-style-type: none"> Excellent Exposure Suitability even under Fluorescent Lighting 	<ul style="list-style-type: none"> Accurate color reproduction even under fluorescent lights
<ul style="list-style-type: none"> Excellent Skin Tone Reproduction 	<ul style="list-style-type: none"> Beautiful, natural skin tone rendition – a Fujifilm feature

It requires no color-compensating filters when used under daylight conditions or with an electronic flash.

2. SPEED

Light Source	Speed	Filter
Daylight	ISO 400/27°	None
Tungsten Lamps (3200K)	ISO 100/21**	LBB-12** (or Wratten No. 80A)

* Indicates the effective speed resulting from designated filter use.

** Fuji Light Balancing Filter

3. EXPOSURES, PRODUCTION NUMBER AND DX CODE

Exposures 15, 25 and 40 exp.
 Production Number CB01 and above
 DX Code 37 – 2

4. EXPOSURE GUIDE

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

Daylight Exposure Guide Table

Light Conditions	Seashore or Snow Scenes Under Bright Sun	Bright Sunlight	Hazy Sunlight	Cloudy Bright	Cloudy Day or Open Shade
Lens Aperture	f/22	f/16	f/16	f/11	f/8
Shutter Speed (sec.)	1/500		1/250		

- NOTES**
- The foregoing settings are for 2 hours after sunrise and 2 hours before sunset.
 - Provide lens openings 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.

Low Light Exposure Guide Table

Light Conditions	Fine Weather Daytime Indoor Scenes	Nighttime Indoor Scenes (under Fluorescent Light)	Evening Scenes	Night Scenes
Lens Aperture	f/2.8 to 4	f/2.8 to 4	f/2.8 to 4	f/2.8 to 4
Shutter Speed (sec.)	1/60	1/30	1/60	1/30

NOTE Since light intensities for indoor and night scenes vary widely from location to location, the data above should be used only as a guide.

5. EXPOSURE UNDER VARIOUS LIGHT CONDITIONS

Daylight

Even when exposed under morning or evening twilight conditions or when color temperatures are low, no special filter use is needed as color balancing can be done during printing.

Electronic Flash

- Electronic flash produces light similar to daylight, so filters are not needed. However, the possibility of undesirable effects on color balance, due to various factors (differences in equipment, amount of use, etc.) should be taken into consideration. Test exposures are recommended.
- If shutter speeds slower than 1/60 second are used, light from non-flash sources, such as room lighting, may cause color imbalances. Make test exposures.
- The use of a flash meter is advisable, but the following formula can also be used to obtain satisfactory lens opening.

$$\text{Lens Aperture (f-number)} = \frac{\text{Electronic Flash Guide Number (at ISO 400)}}{\text{Electronic Flash-to-Subject Distance (meters or feet)}}$$

- Set the film speed at ISO 400. Since the amount of light reflected onto subjects from surrounding surfaces will differ with the conditions, refer to the flash unit instructions.

Daylight Photoflood/Photo-Reflector Lamps

- Daylight-type photoflood or photo-reflector lamp output may be lower than that indicated by an exposure meter, so it is advisable to compensate for this by increasing exposure time or the lens opening. Whenever possible, test exposures are recommended.
- Other factors requiring consideration when determining the exposure time, are lamp configuration, use duration and line voltage, as they may affect lamp output and color balance.

Fluorescent Lamps & High-Intensity Discharge Lamps

- For the best results, the following combinations of color compensating filters are recommended. However, for exacting work, test exposures are advisable.

Lamp Type	Fluorescent				High-intensity Discharge	
	Day-light (D)	Cool White (C.W)	White (W)	Warm White (W.W)	Deluxe White Mercury	Clear Mercury
Color Compensating Filters*	10M +10Y	—	10C	30C +30M	10C	40M +40Y
Exposure Corrections**	+1/3	—	+1/3	+1	+1/3	+1 1/3

* Fuji Color Compensating Filters (or Wratten CC Filters)
 ** Exposure correction values include filter exposure factors. These values are added to unfiltered exposure meter readings. A "+" followed by a number indicates the required increase in lens opening.

- When the fluorescent lamp characteristics are unknown, to obtain generally acceptable results, use a 30M compensating filter and open the lens one stop (+1).

NOTE Different compensation may be required according to special lamp types and length of use, so test exposures are recommended, whenever possible.

- Shutter speeds of 1/125 second for high-intensity discharge lamps and 1/30 second or larger, for fluorescent lamps, will avoid AC power-induced changes in brightness and color being recorded on the film.

Tungsten Lamps

A Fuji Light Balancing Filter LBB-12 (or Wratten filter No. 80A) is recommended along with a 2-stop increase in lens opening, when using 3200 K tungsten lighting. In the case of cameras with TTL metering, there is no need for additional exposure compensation.

6. LIGHTING EQUIPMENT

The conditions of umbrellas, reflectors, diffusers and like devices, could influence photographic light quality. Periodically check lighting equipment for deterioration.

7. LONG EXPOSURE COMPENSATION

No exposure or color balance compensation is required for exposures within a 1/4000 to 2 second shutter speed range. However, for exposures of 4 seconds or longer, provide the compensations indicated below.

Exposure Time (sec)	1/4000 – 2	4	16	64
Exposure Corrections*	Unnecessary	+1/3	+2/3	+1

* A "+" followed by a number indicates the required increase in lens opening.

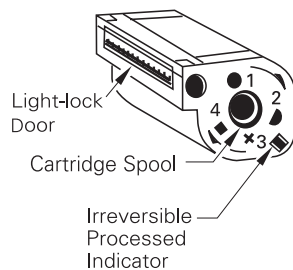
Except for special effects, the normal intensity ratio for main-to-fill subject lighting should remain within 1:4 limits.

8. FILM HANDLING

- Expose film before the expiration date indicated on the film package and process as soon as possible after exposure.
- Expose camera-loaded film before the expiration date and process immediately.
- The following cartridge markings indicate the current status of the film. Make sure to verify the film's status before loading the cartridge.

1	○	Unexposed
2	D	Partially exposed (use of film can be resumed on some cameras)
3	☒	Fully exposed but unprocessed
4	□	Processed

The leading end (tongue) of the film remains inside the cartridge until the cartridge is loaded into the camera, at which time it is automatically extracted and the camera readied for the first exposure. Film cartridges should never be incorrectly handled, such as opening the light-lock door or changing the status indicator by rotating the cartridge spool. The irreversible processed indicator, next to the status markings, should never be broken off until the film has been processed.



NOTE This film has a magnetic strip on which exposure data are recorded for later use when prints of special quality are ordered and also for imprinting exposure date on print.

- X-ray equipment, used to inspect carry-on baggage at airport terminals, can cause film fogging. Both exposed and unexposed films should be removed for manual inspection. As checked-in baggage is also X-rayed, film should be part of your carry-on baggage whenever possible.
- Film fogging may occur near X-ray equipment used in hospitals, factories, laboratories and other locations. Always keep film away from possible sources of radiation.
- Contains a magnetic strip. Keep away from magnetic fields.

9. FILM STORAGE

Unprocessed Film

- Storing exposed or unexposed film under hot and humid conditions may adversely affect speed, color balance and physical property changes. Store film under the following conditions.
 - Ordinary Storage: Protect from heat.
 - Long-term Storage: Below 0°C (32°F)
- Building materials, finishes used on newly-manufactured furniture, paints and bonding agents may produce gases which affect photographic film. Do not store film, lightproof boxes of film, loaded cameras or film holders under these materials.

- Before use, allow films to stand at room-temperature over 1 hour. Opening the package/box while film is cold may cause harmful condensation.

Processed Film

Processed negative strips are returned to the customer inside the cartridge. Exposure to light, high temperature and humid conditions can cause color changes in processed films. Therefore, store in dark, dry, cool and well ventilated locations under the following conditions.

- General Storage: 25°C (77°F) at 30 to 60% RH
- Long-term Storage: 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.

10. REORDERING BY INDEX PRINT

Each cartridge has an ID number and this is also imprinted on the back of each print, as well as on the index print. When reordering a print, all that is required is the frame number on the index print as it contains all the images made from the roll of negatives. (In the Advanced Photo System, an index print is included when prints are ordered with film processing.)

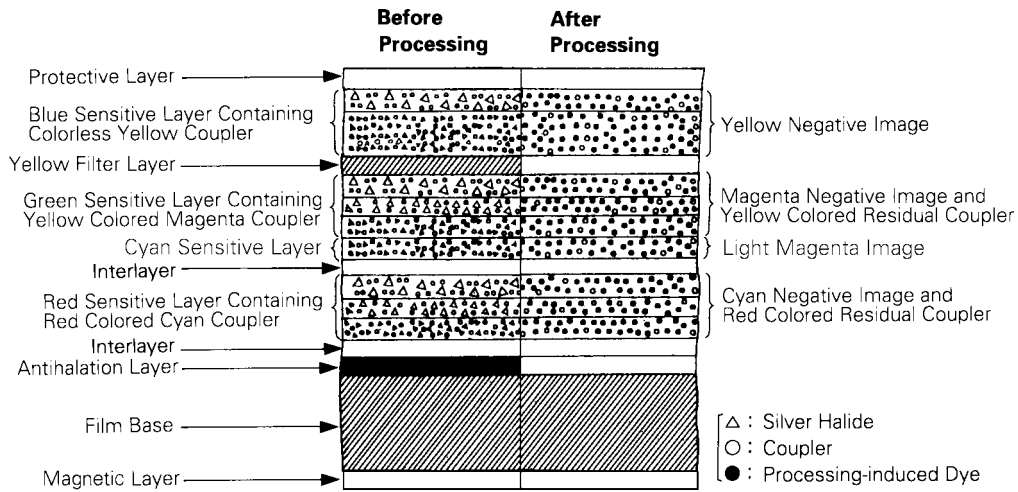
11. PROCESSING

This film is intended for processing in Fujifilm Processes CN-16, CN-16Q, CN-16FA, CN-16L, CN-16S or alternatively by Process C-41.

12. JUDGING EXPOSURE RESULTS

nexia 400 exposure results can be accurately predicted by using an electronic densitometer equipped with Status M filters. An 18% gray card, receiving the same illumination as the subject, when read through the RED filter should render density readings between 0.76 and 0.97 (for exposures under recommended lighting and with optimal film processing).

13. FILM STRUCTURE



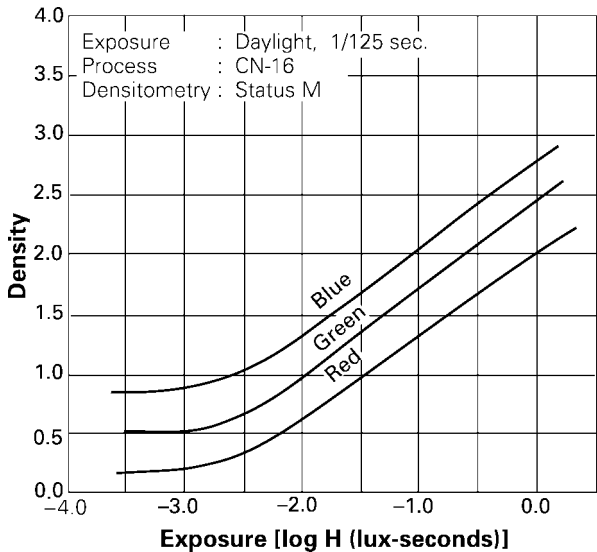
14. DIFFUSE RMS GRANULARITY VALUE 4

Micro-densitometer Measurement Aperture: 48 μm in diameter
 Magnification: 12X
 Sample Density: 1.0 above minimum density

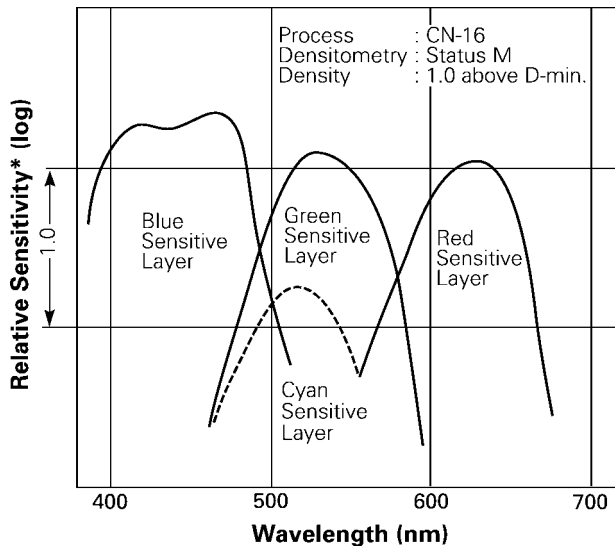
15. RESOLVING POWER

Chart Contrast 1.6 : 1 50 lines/mm
 Chart Contrast 1000 : 1 125 lines/mm

16. CHARACTERISTIC CURVES

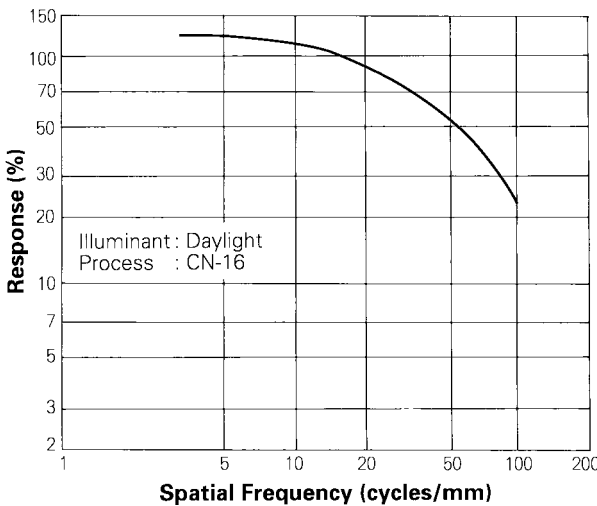


17. SPECTRAL SENSITIVITY CURVES

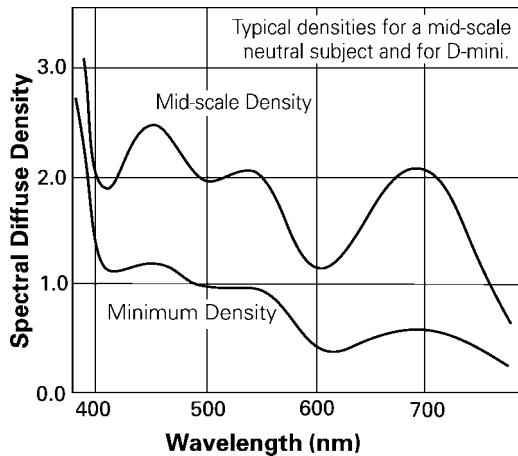


* Sensitivity equals the reciprocal of the exposure (J/cm²) required to produce a specified density.

18. MTF CURVE



19. 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 prior notice.