

# Product Information Bulletin

Fujicolor Crystal Archive

## Professional Paper - Maxima



### 1. Features and uses

FUJICOLOR CRYSTAL ARCHIVE PROFESSIONAL PAPER MAXIMA is a silver halide color paper designed exclusively for digital output. When used in conjunction with medium or large scale digital printers this paper yields high image quality digital prints that make it suitable for such professional uses as portrait or commercial photography.

#### Features

- **Superior Image Stability** Highest level of image stability ideal for display purposes
- **Extreme High D-max** Boasts a wide tonal range, producing high image quality prints with a rich textural quality
- **Natural Whiteness** Clearer, more distinct print images and sharper text quality
- **Vibrant Color Reproduction** Highest color reproduction range with high color saturation, ideally suited to commercial use
- **Excellent Latent Image Stability** Stable production of more uniform high quality prints for greater productivity

### 2. Safelight

Handle in total darkness. If safelight use is unavoidable, observe the following precautions.

- Expose paper no longer than 1 minute to light emitted through two Fuji Safelight Filter No. 103A (or Wratten Safelight Filter No. 13) in a 10 watt tungsten lamp safelight located at least 1 meter from the work area.
- Safelight filters fade with extended use and need regular checking. Replace when paper fogging is detected.
- Exposed paper is susceptible to safelight induced sensitivity increases in the exposed area. For this reason, exposed paper should be subjected as little as possible to safelight illumination.

### 3. Pre-processing paper handling / storage

The higher the temperature and humidity, the more paper, whether unused, unexposed or exposed, is susceptible to adverse changes in speed, color balance, physical characteristics and other properties. Unprocessed paper is best stored at low temperatures. Specifically, the following conditions should be used for paper storage.

- **Short term storage:** Store in a cool and dark location, away from direct sunlight, high temperature and high humidity
- **Long term storage:** Below 10°C (50°F)

Raw paper which has been stored at a low temperature (by refrigeration) should be set aside and allowed to warm to room temperature prior to being opened. If the paper is taken out of its packaging immediately after being removed from refrigerated storage, condensation will form on the paper surfaces, resulting in print color changes and easily damaged surfaces.

The shortest periods required to return freezer or refrigerator stored paper to room temperature (minimum temperature equalization periods) are as follows.

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

Unit: hours

Paper Size \ Storage Temperature	-20°C (-4°F)	0°C (32°F)	10°C (50°F)
127cm x 50 m (50 in. x 164 ft.)	12	10	7

### NOTES

- Do not heat paper in order to equalize temperatures.
- Remove paper from refrigeration one day before use.

If exposed paper remains unprocessed for extended periods of time under normal room conditions or is subjected to high temperature and/or high humidity, changes in the color balance and other properties may occur.

The time between exposure and development should be fixed in order to obtain consistent quality. Avoid waiting until the next day to develop the exposed paper. Rather than holding the paper for processing the next day, initiate processing as soon as possible.

### 4. Processing

This paper is designed for use with Fujicolor Paper Process, CPRA Digital Pro, RA-4 type processes. Combining this paper with Fujifilm chemicals results in many advantages including, greater processing stability, reduced contamination hazards, greater ease in solution preparation and higher print quality

### 5. Control strips

Processing control can be provided through the use of FUJICOLOR CRYSTAL ARCHIVE PAPER Control Strips Process CP-40FA/43FA/47L/48S/49E.

### 6. Post-processing print handling / storage

Since prints are usually used for the long term recording of images, as much effort as possible is made to use materials that exhibit the least amount of change overtime. The effects of high force during folding, light, heat, oxygen in the air, contaminating gases, humidity and mold cannot be completely avoided. Also the change in the photographic image or base material are minimized by maintaining the appropriate storage conditions for prints, such as those used by museums and art galleries. Temperature and humidity control is the most important key to minimizing the change that occurs in prints. Prints stored in the dark under the following conditions may be expected to show almost no change over time.

Storage period with almost no change	Temperature	Relative Humidity
More than 20 years	Below 10°C (50°F)	30% — 50%
10 — 20 years	Below 25°C (77°F)	30% — 50%

### Notes on Prints Storage

- Prints should be inserted into albums, mounted, or placed into a bag (plastic\*) for photographic prints before being stored.

\*Made of polyester, polystyrene or polypropylene plastic, etc

- Even during normal storage it is recommended to store prints at a place as free as possible from hot and humid conditions and away from direct illumination. The following items are examples of undesirable storage conditions.

- Storage in a room closet facing a wall exposed to cold outside air (which may cause condensation).
- Storage in a place near the ceiling, such as an attic, the top of a closet or cupboard (where high temperatures may occur).

- Storing prints with their front surfaces facing each other may result in unexpected problems. If the adjacent print placement is unavoidable, it is necessary to keep the surface separated by, for example, the use of interleaving sheets of paper.

### 7. Light sources for viewing

When inspecting finished color prints, it is essential that an illumination source must be used that has superior spectral characteristics, adequately high color temperature and sufficient brightness. This is because results can appear different, depending on light quality. For precise results, prints should be examined under the conditions designated by ISO 3664-2009. As a general guide, the following conditions are recommended.

Color Temperature : 5000 ± 300 K  
 Average Illumination : 500 Lux or more  
 General Color Rendering Index: Ra 90 or more\*

\* To attain these values, special fluorescent lamps designed for color evaluation (e.g. EDL type) should be used.

When inspecting finished prints, be careful to shut out all external and colored reflected light.

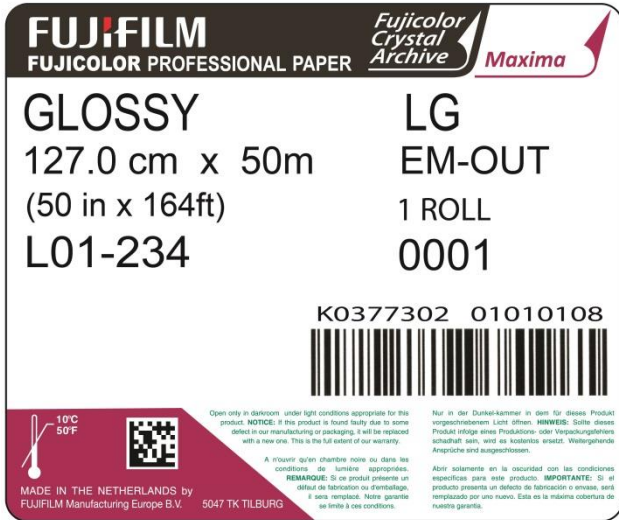
### 8. Paper surface available

FUJICOLOR CRYSTAL ARCHIVE PROFESSIONAL PAPER MAXIMA is available in Glossy and Matte surface.

**Note:** Fujicolor Crystal Archive Professional Paper Maxima is not recommended for Photo Album production.

## 9. Markings (Box / Emulsion numbers)

### 9.1 Box labeling



### 9.2 Emulsion numbers

Emulsion numbering will be in ascending order from Lxx-xxx at introduction.

Note: FUJICOLOR paper is marked with a three-digit emulsion number followed by an additional three digit roll number.

Should any problem arise with FUJICOLOR CRYSTAL ARCHIVE PROFESSIONAL PAPER MAXIMA, the additional three digit number suffix to the emulsion number should be indicated on the claim.

## 10. Back printing

There is no back printing on this paper.

## 11. Technologies incorporated in this paper

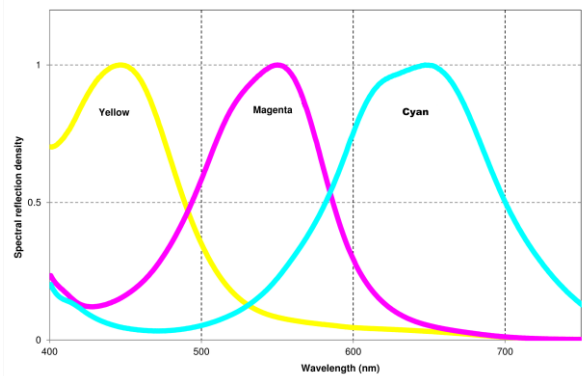
### 11.1 X-Coupler Technology

Through the incorporation of a cyan coupler (X-Coupler Technology), which features a molecular structure developed by Fujifilm's proprietary technologies, this paper is capable of reproducing the subtle shades of green and of forming colors of high purity, such as vibrant blues and reds.

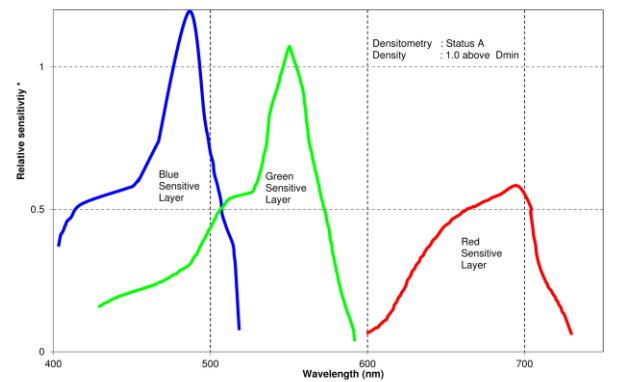
### 11.2 NLS (New Low Stain Spectral Sensitizer) Technology and ARR (Advanced Resistance to Radiation) Technology

FUJICOLOR CRYSTAL ARCHIVE PROFESSIONAL PAPER MAXIMA has not only WE (White Enhancing) technology but also incorporated NLS technology, which is Fujifilm's LSS technology taken to a higher level. The results are more brilliant, purer whites and clearer and more distinct highlights. In addition, ARR technology, an advance over the previous RR technology, has been incorporated to suppress color paper fogging caused by ambient radiation, enhancing the maintenance of white purity in unexposed color paper.

## 12. Spectral dye density curves

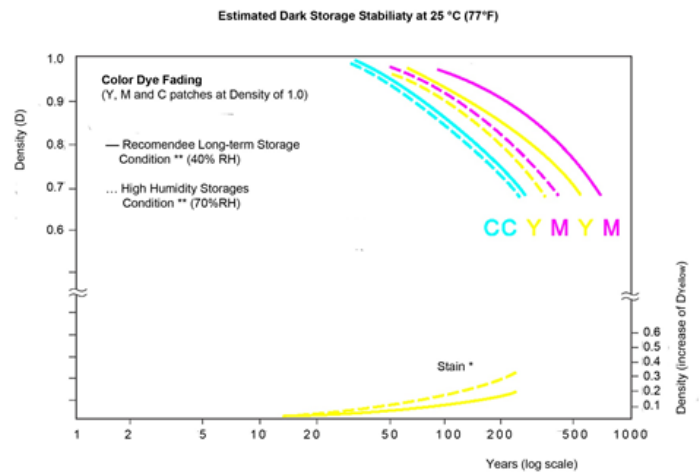
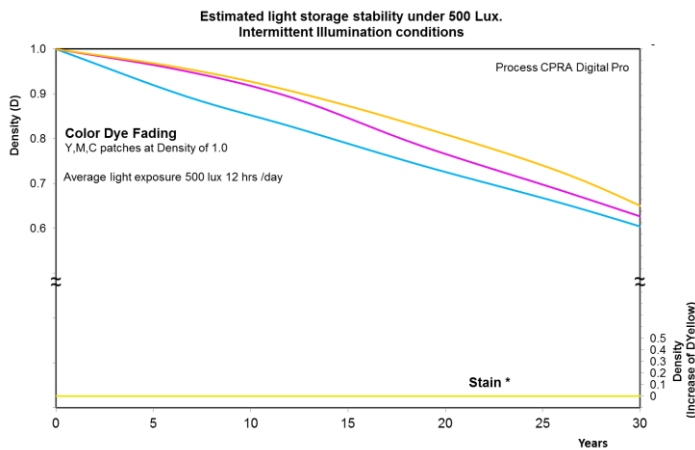


## 13. Spectral sensitivity curves



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

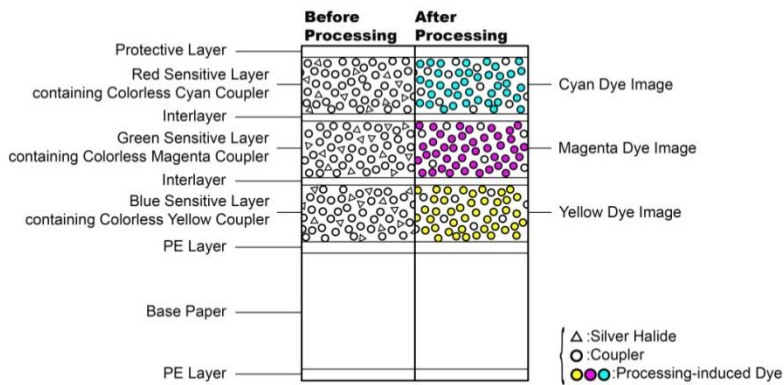
## 14. Image storage characteristics



\* Time induced white background staining (yellowing) is as important as dye image fading in affecting image quality.

\*\* In regard with color image dark storage stability, the level of humidity is just as important as temperature. For this reason, more accurate evaluations can be made by using the two humidity standards; One for high humidity storage conditions (70% RH) and the recommended condition for long term storage (40% RH).

## 15. Paper structure



## 16. Sizes available

		Box packaging	
Length \ Width	Length	50 m	83.8m
		(164 ft)	(275 ft)
40.6 cm (16.9 in.)			■
50.8 cm (20 in.)			■
61 cm (24 in.) OUT		■	
76.2 cm (30 in.) IN		■	
76.2 cm (30 in.) OUT		■	
127.0 cm (50 in.)		■	

Note: Size availability may change without prior notice.

## 17. Calibration data

### Fujicolor Crystal Archive Professional Paper Maxima

Equipment		Calibration data		
Brand	Name	Target density RGB	Basic calibration ymcd	Intermittance rgb
		Glossy / Matte		
ZBE Chromira	SE, Pro Lab, R2R	2.55 / 2.55 / 2.45	n.a.	n.a.
Polieletronica	Laserlab 50/76/127	Printer defines own and highest possible Dmax settings		
Durst	Epsilon	2.55 / 2.55 / 2.45	0.004 / 0.056 / 0.000 / 0.920	90 / 50 / 37
	Theta 50/51		170.2 / 112.0 / 0.00 / 104.3	
	Theta 76/76HS		0.006 / 0.085 / 0.000 / 1.325	101 / 56 / 42
	Lambda		124.0 / 95.8 / 0.00 / 129.0	
OCE Lightjet	430 / 500XL / 5000	Media target can be downloaded from the Fujifilm Europe.eu website		

All recommended Dmax values can only be reached when using high active chemistry equal to Fujifilm CPRA Digital Pro  
For competitive and recycling chemistry the Dmax should be reduced with -0.10 density

Media target and ICC Profile location: <https://www.fujifilm.eu/eu/support/photofinishing/color-management>

**For a correct monotone (BW and Sepia) print quality the advice is to calibrate each emulsion-roll number.**

## 18. Technical Support

In case abnormalities are found when using this FUJICOLOR CRYSTAL ARCHIVE PROFESSIONAL PAPER MAXIMA please contact your local Fujifilm subsidiary and/or distributor

Relevant Fujifilm subsidiary and/or distributor contact information can be found on the following internet address:  
<http://www.fujifilm.com/worldwide>

**Notice:** The data herein published were derived from materials taken from general production runs. However changes in specification may occur without notice



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