

PRODUCT INFORMATION BULLETIN

COLOR NEGATIVE PAPERS

FUJICOLOR CRYSTAL ARCHIVE PROFESSIONAL SUPER TYPE PD_N PAPER

1. USES AND FEATURES

FUJICOLOR CRYSTAL ARCHIVE SUPER TYPE PD_N is a silver halide color paper designed exclusively for digital output. When used in conjunction with medium or large scale digital printer systems or the FUJI DIGITAL MINILAB FRONTIER, this paper yields high image quality digital prints that make it suitable for such professional uses as portrait wedding or album pages.

Features

- High D-Max** Boasts a wide tonal range, producing high image quality prints with a rich textural quality.
- Pure Whiteness** Clearer, more distinct print images and sharp text quality.
- Accurate Color Reproduction** Color reproduction range ideally suited to wedding and portraiture use with excellent skin tone gradation.
- Improved Latent Image Keeping** Improved color balance consistency when time is extended between exposure and processing.
- Excellent Image Stability** Highest level of image stability.

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 a Wratten Safelight Filter No. 13 (or Fuji Safelight Filter No. 103A) 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 the 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 (no longer than three months) 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

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

NOTE: Do not heat paper in order to equalize temperatures.

- If exposed paper remains unprocessed and 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 optimum quality.

4. CALIBRATION DATA FOR PRINTERS

Frontier Printers

All Frontiers require a dedicated LUT when printing. It is necessary to adjust for the paper type for each paper magazine by changing the paper "Type" specification in the "Paper Magazine Registration" menu.

Frontier Series	LUT ver. R
Frontier 3xx	Paper Type B
Frontier 5xx	Paper Type B

Registration and Setup of the Paper Type specification on Paper Magazine for Frontier 700 series

Frontier Series	Profile Ver. F1.23 *
Frontier 7XX Series	LUT E-1

* Included with system Ver. 3.20

Noritsu Printers

Use paper registration number 157

Current profile data is available via your local Noritsu distributor

For 31,32,34 & LPS -24 Pro Series Models
Noritsu Profile CD Part# R504969-01 Vol 2 Version 7.14
(Older 2901 & 3001 Series Need to be on System J001)

For QSS 35+ (LPP900) & 37 / 37HD Series Models
Profile CD Part# R504970-01 Vol. 3 Version N 3.01

Light Jet Printers

Calibration target file name:

Fujicolor CA Super Type PD-N RevA

The calibration targets for the OCE Lightjet 430, 500XL and 5000 printers can be downloaded from the following URLs (websites).

http://www.oce-dgs.com/PrinterSupport/LJ_Customer_Access/LJ_Customer_Access.htm

ftp://ftp.symbolic.com/Downloads/Photo/Media%20Targets/LightJet430_500XL_&_5000/LightJet-Fusion/

Polielettronica

Polielettronica Laserlab 50/76/127

Use the auto calibration tools for setup

Please refer to the following calibration data as a general guide when using the Super Type PDN Paper on a digital printer.

When using the print material for the first time a section of the material should be flashed to light and processed normally. Starting D-max aims should be set approximately .15 to .20 below the flashed black density readings.

Durst Lambda						
Dmax Aim			Basic Calibration			
R	G	B	Y	M	C	D
2.45	2.40	2.30	124.0	95.8	0.00	129.0

Durst Theta 50/51						
Dmax Aim			Basic Calibration			
R	G	B	Y	M	C	D
2.40	2.40	2.30	170.7	112.0	0.00	104.3

Durst Theta 76						
Dmax Aim			Basic Calibration			
R	G	B	Y	M	C	D
2.35	2.35	2.25	0.006	0.085	0.000	1.325
Intermittency						
R	G	B				
101	56	42				

Chromira						
Dmax Aim			Calibration Value			
R	G	B	C	M	Y	D
2.43	2.35	2.30	41	-23	0.00	-7

Agfa D-lab						
Dmax Aim			Cal Factor			
R	G	B	R	G	B	
2.40	2.30	2.25	1.02	.99	.98	

5. PROCESSING

This paper is designed for use with Fujicolor Paper Process CP48S and CP49E or RA-4 type processes

6. CONTROL STRIPS

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

7. POST-PROCESSING PAPER (PRINT) HANDLING / STORAGE

Prints are subjected to various influences (heat, humidity, light, air pollution, etc.) relative to the conditions under which they are stored. The general conditions under which prints are stored are outlined below.

- Recommended Storage Conditions: Temperature: Below 25°C (77°F) Humidity: 30% to 50% RH with good ventilation
- Extended Storage Conditions: Temperature: Below 10°C (50°F) Humidity: 30% to 50% RH

8. LIGHT SOURCES FOR VIEWING PRINTS

When inspecting finished color prints, it is essential that an illumination source 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 3664-2000. 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 light and colored reflected light.

9. PAPER SURFACES AVAILABLE

Lustre

10. PAPER SIZES AVAILABLE

Rolls

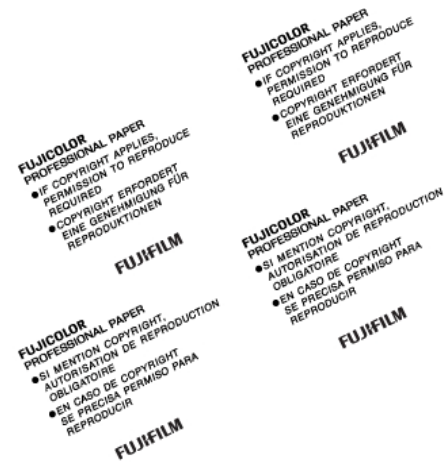
Widths	Lengths			
	100'	164'	275'	575'
4 in				L
5 in.				L
6 in.				L
8 in.			L	L
10 in.			L	L
11 in.			L	L
12 in.			L	
20 in.			L	
24in.			L	
30 in.		L		
32 in.		L		
50 in.		L		

11. MARKINGS (BOX / EMULSION NUMBERS)

11.1 Emulsion Number Range: 900 to 999



11.2 Back Printing



12. TECHNOLOGIES INCORPORATED IN THIS PAPER

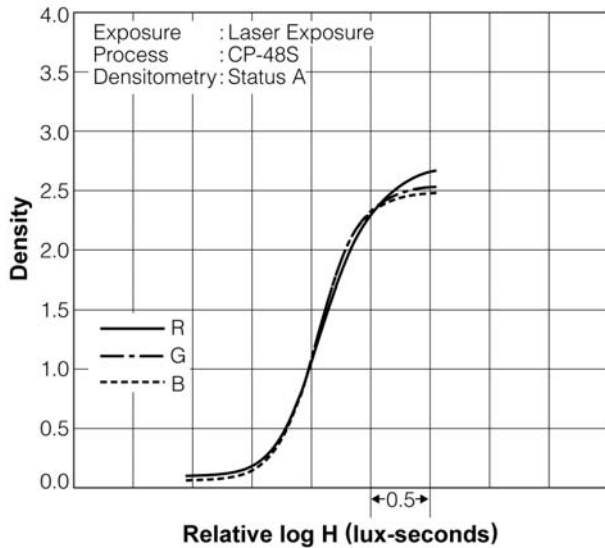
12-1 X-Coupler Technology

Through the incorporation of the cyan coupler (X-Coupler Technology) used in Fujifilm's latest Color Negative Papers, this paper is capable of reproducing the subtle shades of green and of forming colors of high purity, such as vibrant blues and reds.

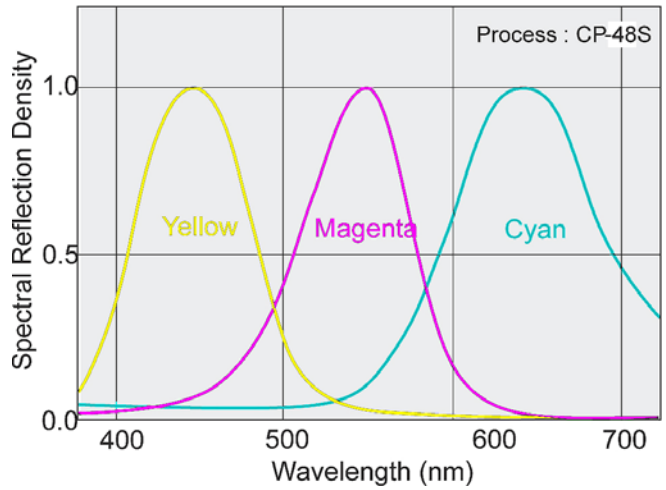
12-2 NLS (New Low Stain Spectral-Sensitizer) Technology and ARR (Advanced Resistance-to-Radiation) Technology

In addition to WE (White Enhancing) Technology used in Fujifilm's latest Color Negative Papers, this photographic paper is more brilliant, purer whites and clearer and more distinct highlights, and has been incorporated to suppress color paper fogging caused by ambient radiation, enhancing the maintenance of white purity in unexposed color paper.

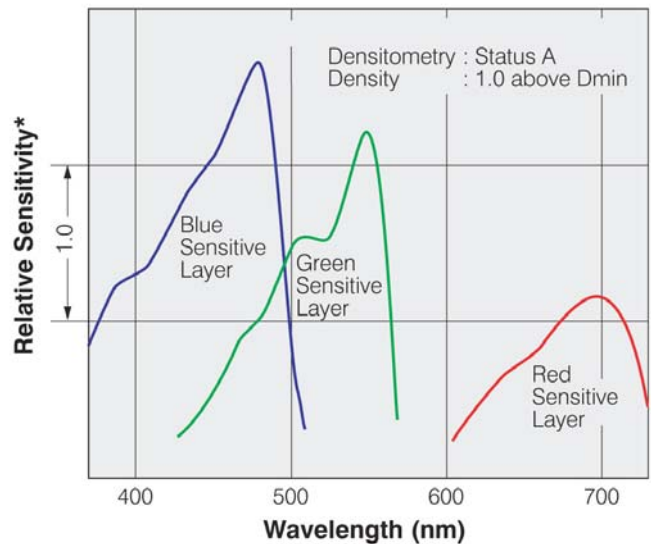
13. CHARACTERISTIC CURVES



14. SPECTRAL DYE DENSITY CURVE



15. SPECTRAL SENSITIVITY CURVES

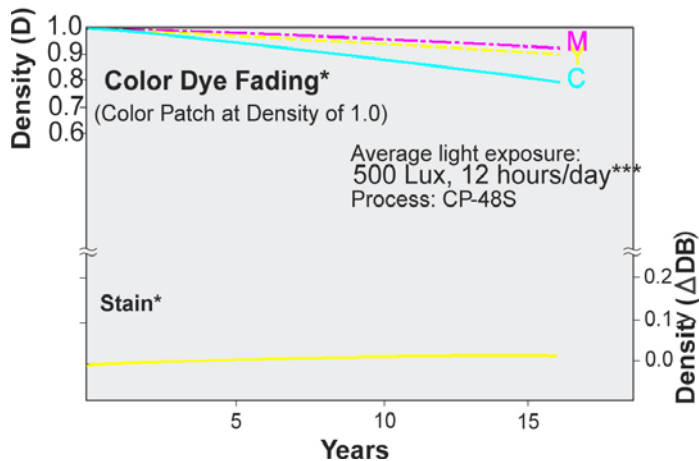
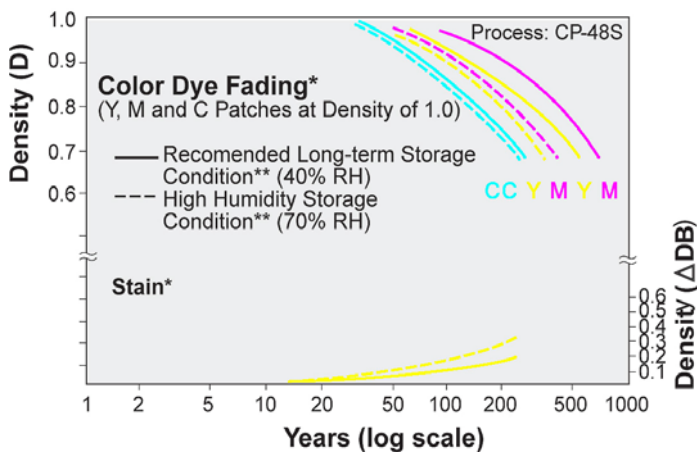


* Sensitivity equals the reciprocal of the exposure (J/cm²) required to produce a specified density.

16. IMAGE STORAGE CHARACTERISTICS

• **Estimated Dark Storage Stability at 25 °C (77 °F)**

• **Estimated Light Storage Stability under 500 Lux Intermittent Illumination Conditions*****

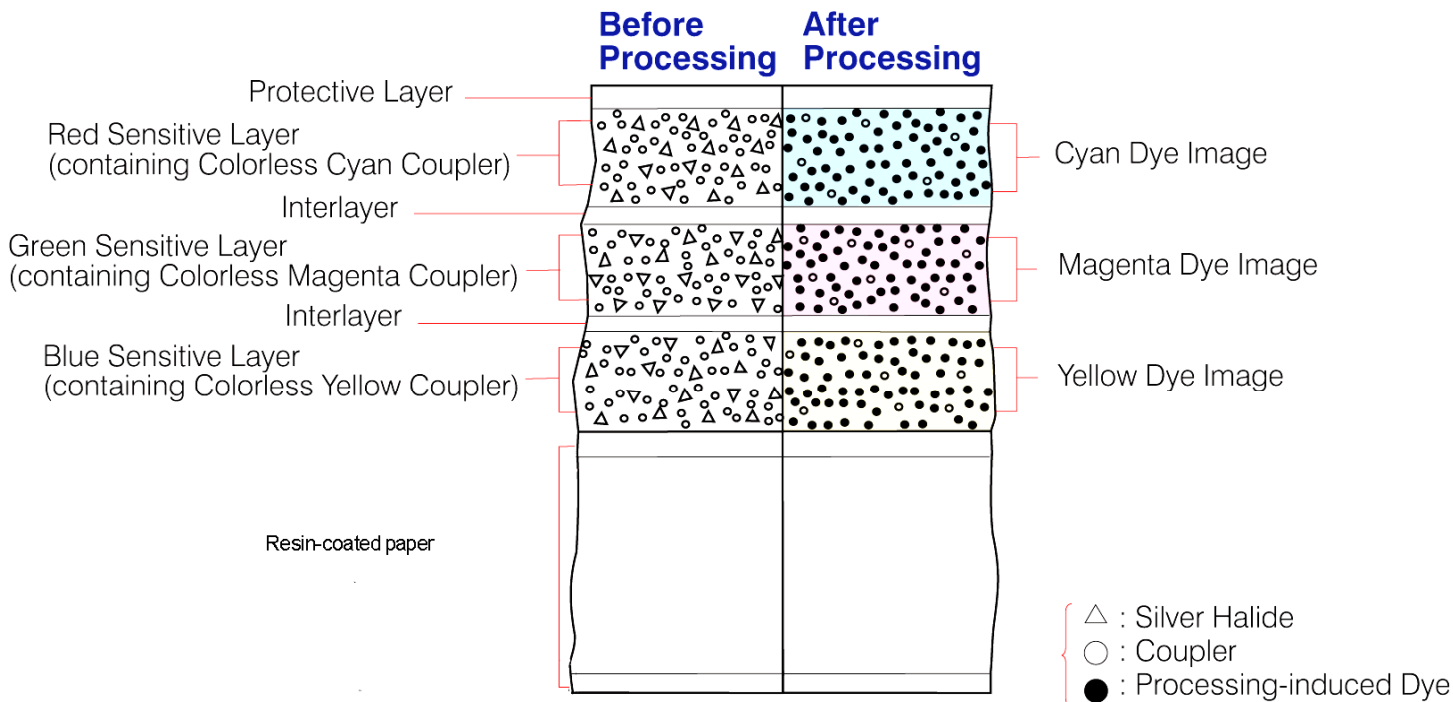


*Time-induced white background staining (yellowing) is as important as dye image fading in affecting image quality.

** In regard to 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 that recommended for long-term storage (40%RH).

*** Since in common domestic situations sunlit areas may be bright as 1,000 lux or more during the day and drop to 300 lux in the evening and at night, storage conditions are usually designated to be at an average of 500 lux of light exposure for 12 hours per day.

17. PAPER STRUCTURE



NOTE: The data herein published were derived from materials taken from general production runs. However, changes in specifications may occur without prior notice.