

# Lasting Prints

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# Light

## Kodak vs Wilhelm Study

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- ◉ Kodak assumes photos displayed in your home will receive an average of 120 lux (a measure of light intensity) for 12 hours a day.
- ◉ Henry Wilhelm, an image permanence expert who runs his own lab, assumes pictures will receive a higher average of 450 lux for 12 hours a day and makes his predictions based on test photos being exposed to 35,000 lux.
- ◉ Here is where it gets tricky. Wilhelm maintains if his lab used Kodak's 120 lux assumptions, an inkjet print he rates for 73 years of lightfastness would last even longer, about 270 years.

# Environment

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- Heat, humidity, and other airborne contaminants such as ozone also affect longevity
- This is called dark fade.
- Most inkjet manufacturers now caution that prints should be placed behind glass or sprayed or laminated to improve darkfastness. *Otherwise, all bets are off on their published longevity ratings which they don't guarantee even if you follow their advice because they are only predictions and not verifiable.*



# Ink and paper

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- ◉ When properly protected--you should expect most modern printers to create images that last from 5 to 50 years before fading.
- ◉ Epson's standard Photo Paper has a rated life of 6 years before fading, while its ColorLife Photo Paper is rated for 27 years.
- ◉ In addition, some ink jet printers are designed to produce images with extremely long resistance to fading.
- ◉ Dye-based ink has a shorter non-fade life. Pigment-based ink jet printers (like the Epson Stylus Photo 2200) can deliver a print life of well over 100 years.
- ◉ Caveat - pigment-based inks aren't as vibrant as dye inks.

# From Epson

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## ● Epson Printers and Inks:

- Prints from the 2200 last for 75 to 200 years (depending on which paper is used) before noticeable fading occurs
  - Prints from the 1270/1280 only have a 10-15 year life span.
- This is because the 2200 uses the pigment-based Ultrachrome ink set while the 1270/1280 used a dye-based ink set.

## Quick Tip

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- Allow it to dry completely
- A print may feel dry to the touch in minutes, it actually takes about 12 hours to dry
- Once the print is dry, protect it using an acid free sleeve or covering it with glass in a frame
- Acid free portfolios increase the life of prints (no exposure to light, except when viewing)



# HP, Epson, Canon and Lexmark

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- HP and Epson offer the best ink and paper choices for DFA printing.
- Canon offerings feature excellent resolution - paper choices are limited.
- Lexmark's inks are not lightfast and do not brand their own paper.

# Inkjet Paper

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- ◉ Paper coatings are either
  - "microporous" or
  - "swellable."
- ◉ Porous coatings dry quickly and have good moisture resistance, but are susceptible to ozone. Swellable papers provide greater lightfastness and are more stable when it comes to pollutants, but they're sensitive to humidity.
- ◉ Brilliant white papers use brighteners that fluoresce blue and absorb harmful ultraviolet radiation—a yellower paper with less brightener will have a longer life.



- HP's cotton base matte Photo Rag designed for the Designjet 5000 and 5500 large-scale printers in partnership with Germany's Hahnemuhle, is rated to last 240 years when used with its pigmented UV inks.
- The large format inkjet HP paper is its instant-dry HP Productivity Semi-Gloss that's rated at over 200 years.

- Epson's pigmented UltraChrome ink printers
- Epson offers nearly two dozen photographic and DFA papers for this series of printers
  - Epson Ultrasmooth Fine Art paper - rated to last over 100 years.
  - Epson's acid-free Velvet Fine Art matte cotton rag paper – rated to last up to 125 years when protected by UV glass, and 180 years with a protective spray.

# Light Jet Printing

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- Lightjet--Digital Prints on Photo Paper - prints are “like photographs”
- The only difference between a Lightjet print and a print made in a traditional darkroom is how the paper is exposed.
  - In the traditional darkroom, a photographer makes a print by projecting light through the original piece of film, which exposes the paper.
  - In the digital darkroom, the Lightjet 430 or the Chromira printer exposes the paper with red, green and blue lasers (some machines use LEDs), and then the paper is processed in RA-4 chemistry--the same chemistry used to make prints in a traditional darkroom.
- Unlike prints made by laying ink on paper, these prints feel like traditional photographs because they are on actual photographic paper.
- Will It Last?
- Lightjet prints on Fuji Crystal Archive paper last 60 years or so without fading. This is more than twice as long as Ilfochrome prints, which was the most popular color printing method.