



FLAAR Report Series on Laser Printers LED Printers Compared with Inkjet Printers





Tips to Assist deciding which make and model of Color Laser Printer to Buy

Updated September 2004 based on DRUPA printer trade show.

Buying by brand name may no longer be the way to assure you get the best printer for your needs. And buying by price is not always a good idea either. The most expensive printer is not always the best; and the cheapest printer may either be surprisingly good, or so deficient in options that you have wasted your money. Nicholas Hellmuth, professor of digital imaging, provides tips and explains how to reach the decision that is best for you.

We discuss Epson (yes, Epson also makes laser printers), Lexmark, HP, Konica Minolta (formerly QMS), Toshiba, and Xante. OKI data printers are discussed in our LED vs Laser printer report (included in this series).

Since people ask which printers are Macintosh friendly, we make comments relative to Mac and PC.



Contents

Abstract

General Comments

Brand comparison: Lexmark, QMS (Minolta), Tektronix, Xante

Epson

Lexmark

HP

OKI(data)

QMS (now Konica Minolta)

Tally

(Xerox) Tektronix

Toshiba

Xante

Commentary

Accessories

Duplex Unit

Other Accessories for your Laser Printer

RAM Memory

Hard Drive

Various

Color Management: RIPs or Color Controller

Six colors vs four colors

Surface: Shiny and Slick, or Matte

In-line vs four-pass

How Laser Printers Work?

Toner

Connections; connecting cables; networks,

etc

Printer languages, RIPs, color controllers

Other aspects of Desktop Publishing

Glossary

Books on Laser Printers

Web Resources

Recommendations on where to buy your Color Laser Printer

Sources and Resources on the Internet



Which is Better? Color Laser or Color Inkjet Printer?

Updated and expanded, September 2004.

Thousands of people face the dilemma, should I buy an inkjet or a laser printer? In the FLAAR digital imaging resource center at two universities we have abundant experience with both laser printers and inkjet printers. We are in a unique position to provide the reasons to go for one, or the other, or avoid one, or the other. We provide the pros and cons of laser printers; the benefits and downsides of inkjet printers; and then compare the two kinds of printer. Our conclusions are based on technology, but also more on your applications and your budget. What do you need to print? How much, or how little, do you wish to spend for the printer. Which printers are sufficiently easy to use that everyone in your home or office can handle the hardware and software? Is inkjet better for text or better for photos? Which printer does best printing on both sides of the paper?



Contents

Pros, Laser printers

Downsides, laser printers

Pros, Inkjet printers

Downsides, Inkjet printers

Comparing laser printers to inkjet printers

Longevity: inkjet vs. laser

Making lots of copies: inkjet vs. laser

Printing on both sides: inkjet vs. laser

Inkcost: inkjet vs. laser

Selection of variable materials: inkjet vs. laser

Capability of printing on thick or stiff material: inkjet vs laser

Quality of printing: inkjet vs laser

Surface Finish

Smoke & Mirrors

Variability among prints: inkjet vs laser

Speed: Inkjet vs Laser

RAM, memory

Comparing Laser & Inkjet with Thermal Dye Transfer printers

Computer Platform: Mac vs PC and Laser Printers

Final note

Summary and Conclusions



Does it make any difference if your desktop “laser printer” is actually an LED printer?

New, August 2004.

Nicholas Hellmuth bases this FLAAR Report on scrutinizing samples of color photographs printed with LED printers such as the OKI compared with traditional laser toner output from HP, Xante, Toshiba, and other printers. If you are even remotely thinking of a color LED page printer, and if you print photographs in color (photos as compared with line art, graphic design, or computer generated art, or CAD drawings), then Prof Hellmuth’s summary may save you from buying the wrong technology.



Contents

Introduction

LED

OKI (Okidata)

Our conclusion based on inspecting output provided by OKI

Sources and Resources on the Internet





*Xerox Tektronix Printers Print with Colored Wax.
How does this Technology Compare with Normal
Laser Printers?*

New, August 2004

The “ink” used by Xerox is variably called “solid ink,” “melted crayon,” or “hockey pucks.” It does not take a 300 page monograph to discuss, succinctly, the pros and cons of Xerox Tektronix phase-change printers. To save you from hours of searching on the internet, we reduce the pertinent facts down to three pages of benefits and downsides of fast-melt solid-ink printers.



Contents

What is the difference between Laser Printers that Use Dry Toner and “Laser printers” that use melted wax?

Learning about the Pros and Cons of melted wax technology

Advantages

Disadvantages

Summary

Bibliography

Sources and Resources on the Internet





Printing Digital Photographs, Graphic Design, Illustrations & Drawings with a B&W Laser Printer

Updated and expanded, August 2004

Any laser printer from Staples or Wal-Mart can produce office correspondence. But if you intend to reproduce photographs, then don't buy at Office Depot, Staples or OfficeMax. You will get a much better printer for printing photographic quality from another kind of printer (that are not sold at Wal-Mart either).

If you are in graphic design, advertising or any application which involves photography or artwork, then you may desire better quality. Some laser printers can achieve what you are looking for. In other cases you may prefer an inkjet printer. FLAAR had experience with all these technologies.

Laser printer technology has advanced considerably and with today's new lasers you can get photo-realistic rendering of your images if you select the correct printer.



Contents

- Why do inkjet printers cost less than laser printers?
- Archival Permanence of Prints
- Mass producing or even multiple copies
- GCC Printers
- Konica Minolta (formerly QMS)
- Lexmark
- Xante
- Solid ink technology
- Paper for laser printers
- Toner for your laser printer
- Preparing to print your photographs in B&W on a laser printer
- Accessories for your laser printer
- Recommendations on where to buy your B&W Laser Printer
- Bibliography
- Sources and Resources on the Internet



How do FLAAR Reports differ from what you get everywhere else?

We do not accept advertising. So no computer manufacturer can pay for a good review.

We do not take commissions on sales of laser printers. Again, companies can't expect to pay off a reviewer to get good words on their products.

We do not do quickie reviews of printers like the popular magazines. Magazine reviews can never document how long these printers really last (because the editors have the printers only for a few days). At FLAAR we write extended reviews only of the printers we have in-house actually in our offices at two universities. So we know the problems, and capabilities, of these printers.

Printer models and specs change almost monthly. So instead of trying to inspect every model it is more practical to explain general facts. For example, how can you protect yourself against misleading advertising claims, phony specs, hype. And what facts do printer manufacturers blissfully not warn you about?

Since FLAAR is a university-based institute, we prefer to provide basic education on how to buy, and enjoy, your next laser or LED printer, color or monochrome (B&W). So the FLAAR Reports provide essential factual information instead of playing favorites with one brand or another. If you learn the crucial facts, then you can better understand the myriad of brands and models.

Our reports have become so popular that the expense of attending to requests from all over the world has

caused our university to ask for cost-sharing from people receiving the reports. Our inkjet series cost an average of \$120 per series. But since FLAAR, and obviously the universities, are non-profit, we are offering the laser printer reports for \$21 (that's not a misprint, \$21 for all five FLAAR Reports on laser printers, including the comparisons of laser to inkjet printers). In November the price will rise, so you might want to order now.

Individual titles are not sold separately because Professor Hellmuth wants to be sure that all the information we have is available to everyone who is faced with the decision of which printer technology to chose: (LED or laser) and which brand and model.

These reports are intended for

- Individuals as well as corporations.
- Use of laser printers at home; laser printers in the office
 - Churches
 - Parks
 - Museums
 - Schools
 - Libraries
 - Government agencies

Laser printers are used for many applications

- Desktop publishing
- Menus
- Church bulletins
- Newsletters
- Flyers
- Reports of every imaginable kind
- Pie charts, bar charts

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