



## Inca Onset X Series

### PRODUCT BROCHURE

Powerful UV flatbed inkjet printers  
from Fujifilm and Inca Digital



## The ultimate production flatbed

**Since 2001 Inca Digital and Fujifilm have collaborated to build outstanding inkjet printers. Based on a thorough understanding of print applications we combine precision engineering with outstanding ink chemistry.**

The powerful Onset X has established itself as the leading UV flatbed platform for the production of high quality, high impact display graphics with outstanding productivity. Onset printers are built with Inca's Scalable Architecture design, which allows a machine to be tailored to meet individual business needs at the time of initial investment, and then allows for future expansion as business needs change and technology advances.

Onset printers are built to deliver three things we know are important to print firms:

**Business efficiency:** Onset offers better efficiency and productivity, producing like-for-like print quality at higher throughput than any other UV inkjet machine.

**Business development:** Onset enables the production of high run length jobs which until now were not viable by inkjet.

**Low investment risk:** Onset is powerful enough to pay for itself in as few as six months. As a business model it gives owners the opportunity to plan their business with much more confidence.





All Onsets print onto a wide variety of rigid and flexible materials producing stunning, high quality images with high productivity. Onset can produce indoor and outdoor print across a range of applications more efficiently than any other print process.



## Scalable Architecture

Inca Onset printers use an innovative modular design that gives Onset owners the power to evolve the productivity and color configuration of their printer to match changing business needs.

By designing Onset with the ability to adapt ink tanks, printheads, UV lamps, automation, speed modes, electronics and software, Inca has set a new versatility standard in high-end flatbed printing.

Onset Scalable Architecture allows owners to keep pace with new technology developments and maximize their return on investment.

### Fits your business today

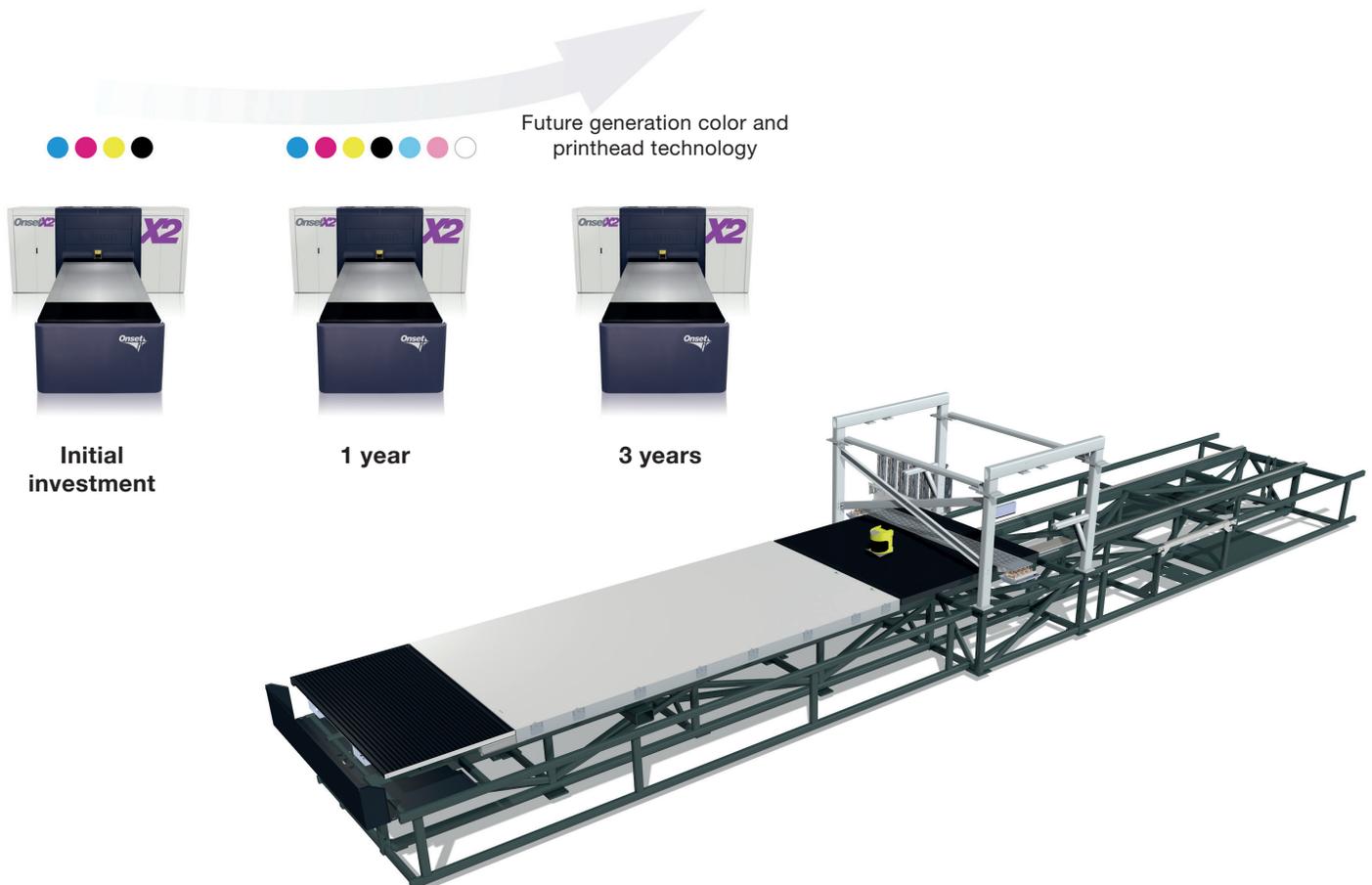
There are currently a multitude of different Onset configurations to choose from, enabling you to choose the right model with the ideal performance and price point for your business today.

### Fits your business tomorrow

Onset has the power to evolve to fit your changing needs. Whether you need additional productivity, increased image quality or extra versatility with additional color configurations, Onset can be modified on site to satisfy all.

### Maintaining your competitive edge

Every Inca Onset is built on a very robust chassis with robust electronic control systems, software and drive mechanisms, and uses Fujifilm Dimatix Spectra drop-on-demand inkjet printheads. This combination has proven to be the right investment for hundreds of businesses worldwide.



## Onset X series

Onset X is built for a unique combination of quality, productivity and flexibility on the common scalable platform that the Onset X1, Onset X2 and Onset X3 share. It is built to accommodate up to 14 ink channels with a choice of printheads, which can be configured in a variety of ways depending on business needs.

### X1

With a maximum throughput of over 5,900 ft<sup>2</sup>/hour (560 m<sup>2</sup>/hour), equivalent to 112 full-bed sheets/hour with S printheads, the Onset X1 is ideal for companies producing fast-turnaround retail graphics with a choice of printheads: Q, R or S. The Onset X1 features eight active channels: four print CMYK and the remainder can be configured as required using a combination of light magenta, light cyan, white and orange (LmLcWO). When the time is right, an additional carriage can be added to scale up to an Onset X2 or X3. The X1-LT is also available, which provides the amazing print quality associated with the Onset series, but offers an entry level investment.

### X2

With a second set of CMYK, the Onset X2 delivers even higher productivity — over 7,800 ft<sup>2</sup>/hour (725 m<sup>2</sup>/hour), equivalent to 145 beds/hour with S printheads — while an optional six LmLcWO channels can be populated to add versatility. Also upgradeable according to business needs, the 14-channel Onset X2 provides the capacity to win more work with either R or S printheads. A choice of uni-directional, bi-directional and super high-quality print modes can be selected depending on the specific job requirements.

### X3

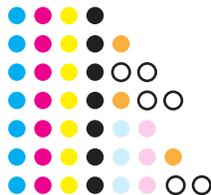
Capable of printing over 9,600 ft<sup>2</sup>/hour (900 m<sup>2</sup>/hour), equivalent to 180 beds/hour with R printheads, the Onset X3 features 3 x CMYK ink channels plus the choice of white or orange. The Onset X3 sits at the pinnacle of productivity. With this printer, users of analog screen printing lines can take the digital route, confident they can print long runs of high-quality print with superb consistency and reliability.

### Possible color configurations

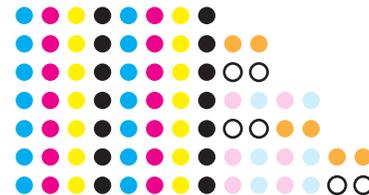
Onset X1-LT



Onset X1



Onset X2



Onset X3



### Printhead options

#### Q Printheads

##### Ultimate quality at speed

For the production of close-view, high-value images with lower volumes at near-photographic quality. Onset Q printheads feature a 9 picoliter drop size.

- ▶ Applications: In-store fashion and cosmetics type graphics, close-view display and signage

#### S Printheads

##### High quality at speed

For the production of high volumes of high quality print on a wide variety of media. The 27 picoliter drop size provides versatile and productive printing of images where viewing distance is not critical.

- ▶ Applications: General in-store display graphics and signage, in-store display stands, outdoor signage

#### R Printheads

##### Super high quality at very high speed

For the production of high volume, quality images onto a wide variety of media. R printheads jet a 14 picoliter drop size providing a good balance of quality and volume for the display POP and signage market.

- ▶ Applications: General in-store display graphics and signage, in-store display stands, outdoor signage

## Built for long-term performance

Onset printers are the fastest in the world at like for like quality. The technology is world-leading: powerful linear motors and vacuum beds that can hold just over 175 pounds of media; full width printhead array and UV lamp systems allow almost instantly cured print; powerful handling systems ensure phenomenal productivity. Onset's print engine and fast moving vacuum bed are built on a very robust chassis which enables pin-point drop placement accuracy for billions of drops per second, all day, every day.

Onset is a long term investment. Inca engineering, Fujifilm chemistry and self-monitoring features ensure Onset printers continue to deliver consistent quality and speed for years and Scalable Architecture enables your investment to evolve.

### **Build quality Unbeatable uptime**

*Onset X's concept and design is Inca's 6th generation of moving print bed technology. It takes known and understood systems and makes them better. A patented 'print-a-shim' process takes Inca's class-leading technology to the next level to ensure a completely flat table with zero-tolerance. It's designed to put drops of ink in the right place for stunning, vibrant results, at speed, time after time.*

### **Fujifilm Dimatix printheads**

#### **Great definition at high speed**

*Spectra heads have proven their reliability in full production for many years. To get the best throughput from Onset, drop size and placement are precisely calculated to give excellent results at top speed.*

### **Full-width printhead array**

#### **Textural banding eliminated**

*The print carriage spans the whole width of the print bed and doesn't scan across the media. Images do not suffer from textural banding and consistent print means the cost of rejected prints is reduced.*

### **Full-width UV lamp system**

#### **Lower lamp settings, media doesn't warp**

*Onset has multiple UV lamps that allow for fast bidirectional print. The system can also vary the UV dosage and produce a range of print finishes from satin to gloss. An optional advanced high-speed shuttering systems protects printheads from UV damage when printing thick substrates. Only Onset can produce a high speed, high gloss finish.*





### Zoned vacuum flatbed

#### Quick set-up and switch between jobs

Onset has an accessible flatbed design for simple loading of rigid materials, with a best-in-class capacity of over 175 pounds and maximum media thickness of 1.97 inches (50mm). The vacuum table is divided into twenty-five independent zones, and coupled with a new table skin design, virtually eliminates the need for bed masking. Dual registration points ensure accurate and simple double sided registration.

### Uvijet ink Great mileage, amazing color

Onset is fuelled by Fujifilm's Uvijet inks, which produce strong vibrant colors. Uvijet inks are available for a wide variety of applications and markets.

### Automation High throughput, auto-stacking

Onset has powerful, efficient handling systems designed to feed it as fast as it works, but still allow the operator immediate and direct access to the bed and registration points. Short run and one- or two-off jobs can be done in between long, automated runs for ultimate flexibility.

### Simple operation Get up and running quickly

With a simple front-end interface featuring improved off-machine job set-up and straightforward maintenance routine, Onset is designed for maximum uptime. As part of the initial installation, operators receive basic training that enables them to run and maintain the machine efficiently.

## Intelligence for peace of mind

Intelligent features enable Onset to monitor its own condition to maintain optimum performance and print quality and minimise printhead deterioration or damage.

### Intelligent cleaning

Sensors monitor the amount of UV light exposure around the print carriage and control the cleaning cycles in the daily schedule to maintain optimum performance and printhead life.

### Intelligent print quality management

Inca's iNozzle intelligent nozzle mapping system maintains print quality even if printhead nozzles are missing or deviating which would otherwise be seen as very visible print defects.

### Vacuum bed monitoring

Vacuum level monitoring will stop printing if the pressure is too low to hold the material securely. This helps to prevent possible damage to the print carriage when printing porous materials.

### Intelligent material height detection

The material height detection system detects lift across the material and ignores small defects in the surface which do not pose a risk to the print carriage, reducing unnecessary stoppages and downtime.

### Intelligent software

Inca software helps users increase the efficiency and productivity of Onset, enabling access to key management data.

## Service and support network

Your business depends on maximum uptime from your digital equipment. Inca Digital and Fujifilm recognize that your investment in cutting-edge technology needs to be matched by a support service that is customer focused, responsive and reliable.

Onset installations are supported by warranty, parts and service package options, tailored to best suit your business. Front-line support is available throughout North America using engineers certified at Inca's training facility in the UK.

Inca Vision is a remote system that monitors Inca printers for enhanced customer support. It enables Inca to diagnose a machine, and in many cases, catch issues before you need to call an engineer for service.



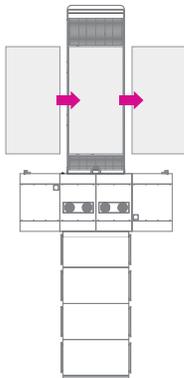
## Handling for any kind of job

Inkjet's rapid progress as a print technology has expanded its viable run-length compared to other methods. With Onset, the crossover point is up to seven or eight hundred individually customizable prints on virtually any display media.

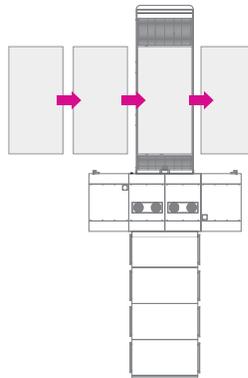
From high-value short-run prints to conventional long runs, Onset can handle all sorts of print jobs and materials in a working day, quickly and efficiently.

Short-run jobs can be printed with manual loading and take-off, but as an Onset can finish two full beds of print in less than a minute, a fast and powerful handling system is vital if Onset is to perform to its full capacity for longer runs.

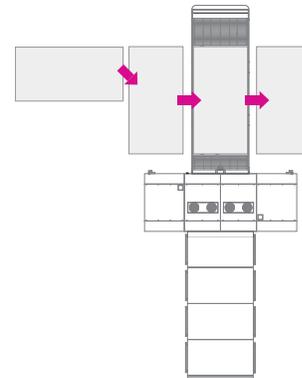
Onset's handling system options can be configured to best suit your production environment.



3/4 semi-automatic handling



Fully automatic handling for display POP



Fully automatic handling for corrugated board





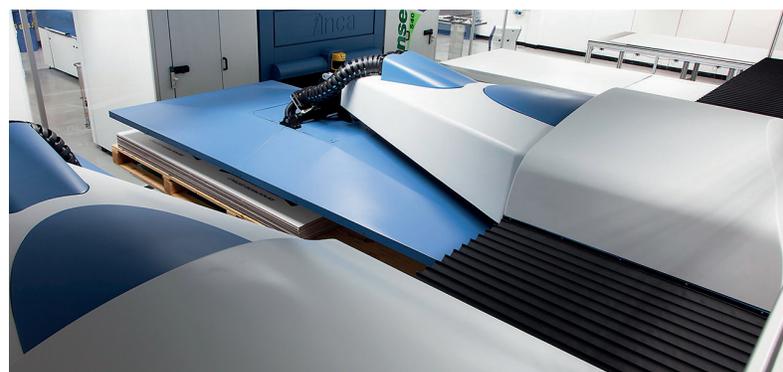
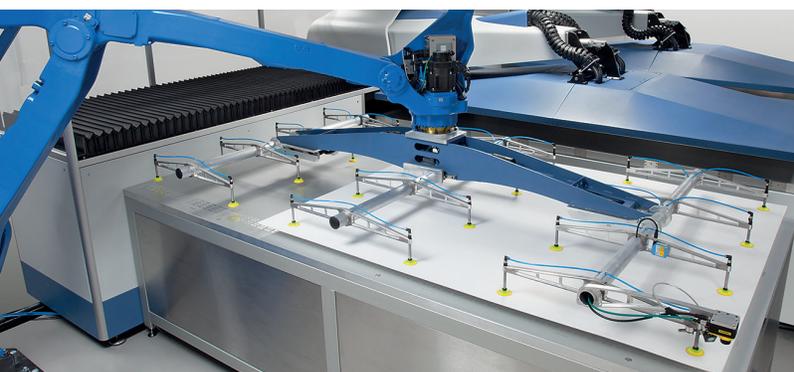
### 3/4 semi-automatic handling

The 3/4 automation system lets you print single sheet, multiple sheet or double sided print in registration. The operator loads material onto a preload table and the system takes over the rest, stacking it on a pallet for easy removal of the printed stack. Best of all, the system allows the operator immediate, direct access to the bed and registration points for quick switch between manual and semi-automatic work.



### Fully automatic handling for display POP

An automatic material loading system that is designed to handle all types of display and signage materials. It works in conjunction with the 3/4 handling unit to provide full automation, handling multiple sheets with registration. The loader can be moved away from the machine to allow access to the print bed.



### Fully automatic handling for corrugated board

The fully automatic handling system is designed for difficult materials like unconditioned corrugated board. Vacuum-to-vacuum transfer ensures precision handling, from the robotic arm pickup, to placement on the print bed and stacking of printed board. When combined with Uvijet inks for corrugated board, this system enables Onset to be used for cost-effective production of corrugated displays.

## Uvijet ink: The technology that fuels the machine



### Smooth, high definition, vibrant prints

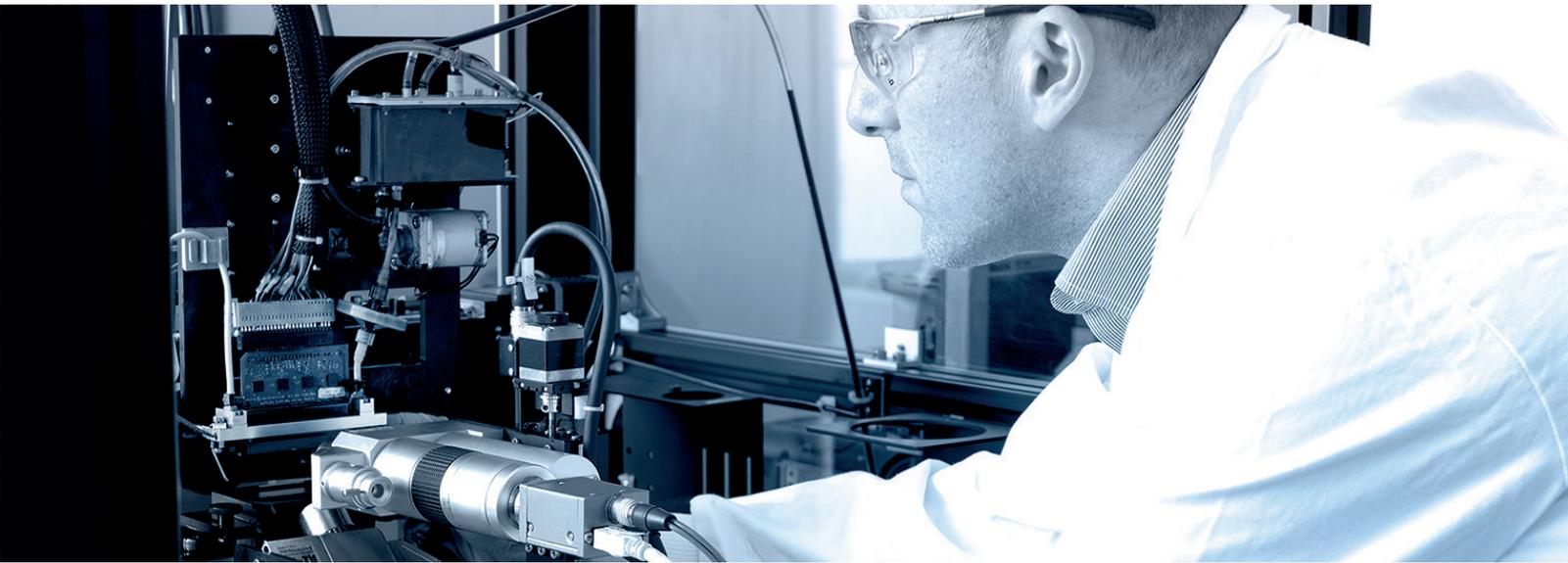
The life-blood of Onset is Uvijet ink. It is manufactured with Fujifilm's patented Micro-V dispersion process which enables the ink to have a higher pigment concentration. The result is visibly stronger, more vibrant colors, which can be consistently reproduced. Uvijet offers phenomenal mileage even when producing top quality high-gloss prints.

Onset printers are able to precisely control the print finish, from low-glare satin to high-impact gloss. Onset prints are cured instantly and are ready to pack and ship straight away.

### White ink option

A white ink option is the ideal solution for businesses that produce high-value backlit/frontlit and double-sided day/night POP display graphics where the ability to print high-opacity white as a base, spot color or top layer quickly and cost effectively is important.



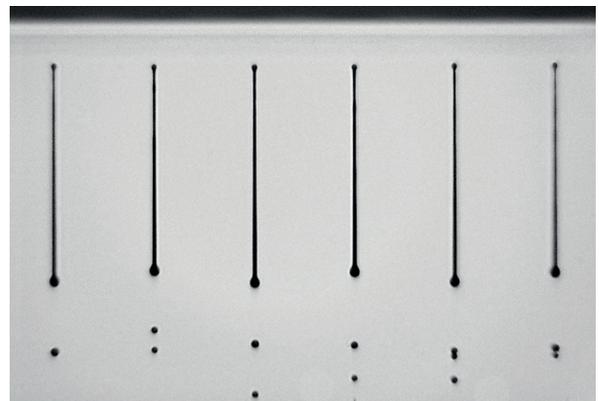


### Every drop matters

Onset's full-width printhead array jets billions of drops per second, each directed to a precise location, producing hundreds of square feet of high-resolution print per hour.

The demands on printheads and ink performance are very high, but to jet well and reliably they must be designed for each other.

Onset's Uvijet inks are developed by Fujifilm Speciality Ink Systems in the UK, working in partnership with sister company printhead manufacturer, Fujifilm Dimatix, to develop optimum ink chemistry for the printheads. As part of the design process, printhead jetting patterns are tailored to the ink to achieve the best performance and reliability.



*Ink drop formation on the journey from printhead to substrate. To achieve the best image quality Onset must fire a drop at the print surface to land with pinpoint accuracy and in perfect shape. Only good ink design, tuned to the printhead, makes reliable jetting possible.*

## Developing inkjet platforms of the future



Piezo inkjet is the core technology behind the latest generation of inkjet printers like Onset. Fujifilm and Inca Digital collaboration continues to drive the technology to develop tomorrow's inkjet systems and produce the printer platforms of the future.

Fujifilm is uniquely positioned with printhead, ink and fundamental inkjet integration technology development in house.

Inca is a world leading equipment manufacturer, with combined resources of mechanical designers, software engineers, project engineers and electronics developers, and 20% of staff working in research and development.



## See for yourself

### Fujifilm's Advanced Print Technology Centre

Fujifilm's Technology Center

Fujifilm's state-of-the-art demonstration facilities are available for you to test-drive Onset, put it through its paces, and see how well it handles your work. Experience a demonstration of how Onset produces the right quality print at the throughput speeds you need to prove your return on investment calculations.

Your sales representative can arrange a visit to the Fujifilm Technology Center in Hanover Park, IL, where you can see all the latest machines and software in Fujifilm's wide format systems portfolio.



### Fujifilm wide format systems

Fujifilm's high performance inkjet platforms are based on UV curing inkjet technology, fuelled by Uvijet ink which delivers instant curing and high production speeds with excellent image quality and color vibrancy.



#### Inca Onset X series

*The world's fastest dedicated wide format flatbeds*

#### Uvistar Hybrid 320

*A 3.2 meter combination flatbed and roll printer providing the ultimate in flexibility.*

#### Uvistar series

*The cost-effective platform for superwide graphics*

#### Acuity flatbed series

*The world's most popular mid-range flatbed platform*

#### Acuity LED

*High quality, versatile roll printer with the latest LED UV curing*

[www.inkjetinsights.com](http://www.inkjetinsights.com)

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