

Product Information Guide

VersaUV
PRINT&CUT LEC-300



Overview

World's First UV Inkjet Printer/Cutter

Roland is pleased to announce the new **VersaUV LEC-300** roll-to-roll UV inkjet printer/cutter, our most versatile 30" wide print/cut device to date.

Priced at \$49,995, the new LEC-300 combines the quality, versatility, reliability and ease-of-use of our award-winning SOLJET PRO III series with the most advanced UV ink and curing technology for the ultimate in UV digital printing and contour cutting. Featuring a unique ink configuration which includes CMYK + White + Clear ink and highly-energy efficient, dual UV LED lamps, the new LEC-300 is capable of producing superior image quality at photorealistic resolutions up to 1440 dpi on the widest variety of substrates.

Not only did we engineer the new LEC-300 to be the first and most advanced UV printer/cutter ever – there is simply no other device that delivers four color printing plus white and clear combined with integrated print/cut capabilities anywhere near this price.

Developed to deliver the best UV print quality and versatility in the industry, Roland's ECO-UV ink is priced at \$79.99 per 220 ml cartridge.

The only limit is your imagination

The LEC-300 ships with the newest version of VersaWorks which has been optimized by Roland software engineers to take full advantage of this printer while keeping the user interface simple and easy to use.

The unique ink configuration combined with Roland's award-winning print and cut technology offer a simple, automated workflow for the production of unique, high-value-added prints never achieved with conventional inkjet printing without incurring costly labor and time-consuming, multi-step processes.

For example, custom shaped labels with high-gloss area highlighter can be easily produced with the LEC-300 by combining CMYK printing, clear coat with gloss finishing and contour cutting capabilities. This multi-step process can be completely controlled from VersaWorks with absolutely no need for the user to touch the prints or the printer until the job is finished.

Users are now free to unleash their vision to create and output complex designs quickly using the LEC-300, all without having to outsource any portion of the job.

The Most Advanced UV Inkjet Printing and Cutting Machine

LEC-300 boasts several unique features that set it apart from other UV printers available in the market.

- **Advanced dual UV LED curing system**
 - Highly energy efficient and low-heat solid state UV LED curing system
 - Ozone free and no harmful UV-B and UV-C radiation
 - Instant ON and OFF
 - No costly, complex and loud shutter mechanism
 - Extremely long life
 - Power consumption 90% lower than conventional UV inkjet printer

- **Newly formulated flexible ECO-UV inks**
 - Optimized for the LEC-300 curing system for perfect curing at all print speeds
 - Cured inks are highly flexible, enabling stretching and application to curved surfaces without cracking
 - VOC free and completely safe when cured
 - Superior scratch and alcohol-resistance
 - Expanded media compatibility with both coated and uncoated media

- **Unique ink configuration for unmatched capability**
 - High opacity white ink for printing on clear material for rich, dense color images
 - Clear coat for highlights, special effects, realistic textures or for enhanced durability

The LEC-300 is the ultimate tool for short run label production, decals, packaging comps, design proofs with special effects, personalization products, Braille, POP and much more. The unique combination of advanced UV printing with Roland's print and cut technology makes this the world's most advanced printer/cutter with unmatched versatility, flexibility and flawless print quality in every print mode.



Media: White PET label stock



Media: Silver metallic matte PET label stock



Clear polypropylene for labels



PVC self adhesive vinyl



Media: Coated paper for offset lithography



Book cover: Artificial leather



Faux leather purse



Polyethylene sheet for operation panels

Sample output produced with LEC-300

The LEC-300 delivers rich, dense 4-color CMYK images at a production speed of 29 sf/h (2.7 m²/h). For maximum flexibility, the LEC-300 features an automatic take-up system for unattended printing.

Public Announcement & Ad Embargo Date: September 8, 2008

Pricing & Availability: \$49,995 U.S. List Price

Shipping: Units begin shipping October 15, 2008

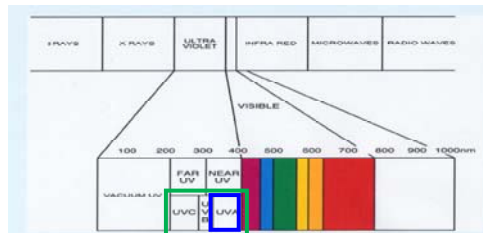
Key Features

VersaUV LEC-300

- Designed for the Environment and Safe
- Staggered Dual UV LED Lamp Curing System
- Advanced ECO-UV ink
- Unique Ink Configuration: CMYK + White and Clear Coat
- The Widest Media Compatibility
- VersaWorks RIP Software
- Roland Intelligent Pass Control™
- Outstanding Print Quality
- Advanced Media Take-Up System
- Two-Year Trouble-Free Warranty

Designed for the Environment and Safe

The LEC-300 has been designed to be friendly to the environment requiring only 320W of power in operation, which is approximately only a tenth of power used by conventional UV printers. The LEC-300 is also the world's first Energy Star certified wide format UV inkjet and automatically enters a low power mode when it is not used for an extended period of time. This low power design literally saves thousands of dollars in electric bills each year and reduces considerably the emission of green house gases.



Metal Halide Lamp LED

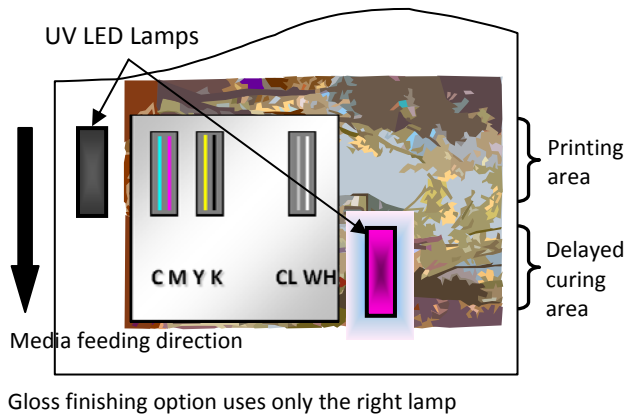
Traditional UV curing equipment is also associated with ozone generation and harmful UV light exposure. Ozone is a known air pollutant that can cause lung damage and respiratory problems while the UV light in the range called Far-UV of UV spectrum can cause eye damage, skin cancer and accelerate skin aging. The LEC-300 uses a light source that is completely ozone-free and emits light in the range called Near-UV of UV spectrum which is much safer than conventional UV lamps.

Unlike many other UV printers in the market that require wearing inconvenient and uncomfortable protective gloves even for basic operations such as ink refilling, the LEC-300 employs the proven sealed-cartridge system, reducing the risk of any direct contact with the inks. Proper ventilation is recommended for odor control and the printer is ventilation-ready, featuring a ventilation hood for easy connection with an air filtration system.

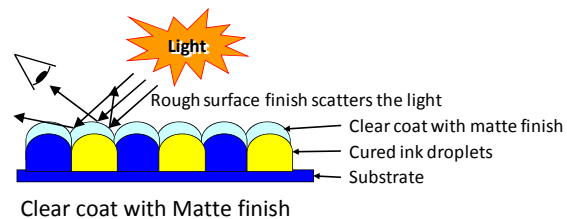
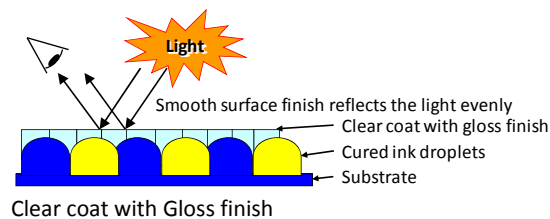
Staggered Dual UV LED Curing System

The LEC-300 includes two state-of-art solid state UV LED lamps arranged in a staggered configuration that offers many advantages over conventional UV lamps.

- Longer life span – the LED lamps on the LEC-300 last up to 10,000 hours which is roughly ten times more than conventional UV lamps.
- Low heat and highly energy efficient – while conventional UV lamps can reach temperatures as high as 1500°F (800°C) requiring complex heat management systems, the LED lamps on the LEC-300 are extremely energy efficient and generate very little heat. This virtually eliminates any risk associated with high heat such as damage to the substrate, head crash caused by media deformation and even risk of fire.
- Instant On/Off – LED lamps can be turned on and off instantly and are ready to use immediately after the printer is turned on. Conventional curing systems may take up to ten minutes to reach the nominal output level and require complex, noisy and failure-prone shutter systems to protect the substrate and the head's capping system from exposure to UV light and heat.



The staggered arrangement of UV lamps, with the left lamp mounted in line with the print heads and the right lamp mounted forward, is another Roland innovation, which enables the choice of finishes (gloss or matte) for the clear coat. When gloss finish is selected, only the right lamp is used for curing, allowing enough time for droplets of clear coat to spread and form a smooth surface which reflects the light evenly. For matte finish, both lamps are used, curing the droplets of clear coat shortly after they land on the surface of media forming a rough surface which scatters the light.



Advanced ECO-UV Ink

The ECO-UV ink was especially formulated for the LEC-300's curing system for perfect curing at all available print speeds, delivering high color density and wide gamut for exceptional images print after print. ECO-UV ink adheres to a wide range of coated and uncoated media including foils, paper, clear films and vinyl for increased versatility. Instant-drying and flexible, ECO-UV ink produces prints that require no degassing and can be stretched and applied around curved surfaces and edges without cracking. The clear coat not only gives an unprecedented high gloss finish on output, but also improves scratch, chemical resistance and outdoor durability. Although not suitable for long term outdoor use without proper UV protection, ECO-UV ink shines in indoor applications such as labels and POPs. In outdoor applications, ECO-UV ink lasts up to a year when clear coat is applied as a finishing process and up to 6-months without the clear coat. Packaged in no-mess 220 ml cartridges, ECO-UV ink is virtually odorless, VOC-free and safe after curing.



Unique Ink Configuration for Unmatched Capabilities

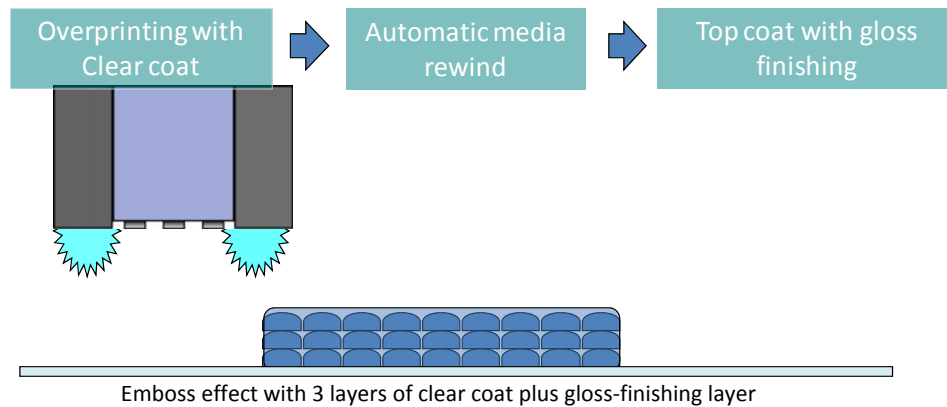
The LEC-300 boasts a unique ink configuration which includes white ink and clear coat in addition to CMYK colors. The high-opacity white ink is ideal for producing rich, dense color graphics on clear, dark opaque and even metallic substrates. The clear coat adds unique capabilities, which includes high-gloss area highlighter, full flood gloss finishing or added durability and special effects such as 3-dimensional textures (emboss) by printing multiple layers of clear coat for value-added prints. The combination of these features enables the production of exclusive prints that command premium prices, while reducing considerably production costs over conventional workflows by eliminating manual labor and intermediate processes.



Label printed on a metallic media with white flood

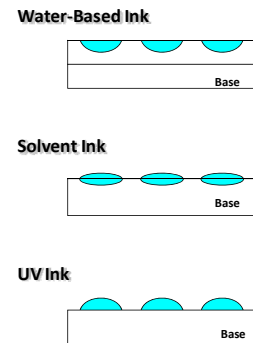


Clear coat applied on the sword for glossy area highlighter



Unsurpassed Media Compatibility and Color Consistency

Droplets of ECO-UV ink are cured by the UV lights shortly after they land on the surface of the media, leaving almost no time for the droplets to react or be absorbed by the media. This virtually eliminates any ink and media compatibility issue, making the LEC-300 compatible with a wide variety of coated and uncoated media. Many stock media for equipment such as label printers and offset printers can be printed with the LEC-300 without any special treatment. The absence of ink reaction and absorption also means that colors will be consistent across different media without requiring profiles specific for the media.



Roland VersaWorks RIP Software

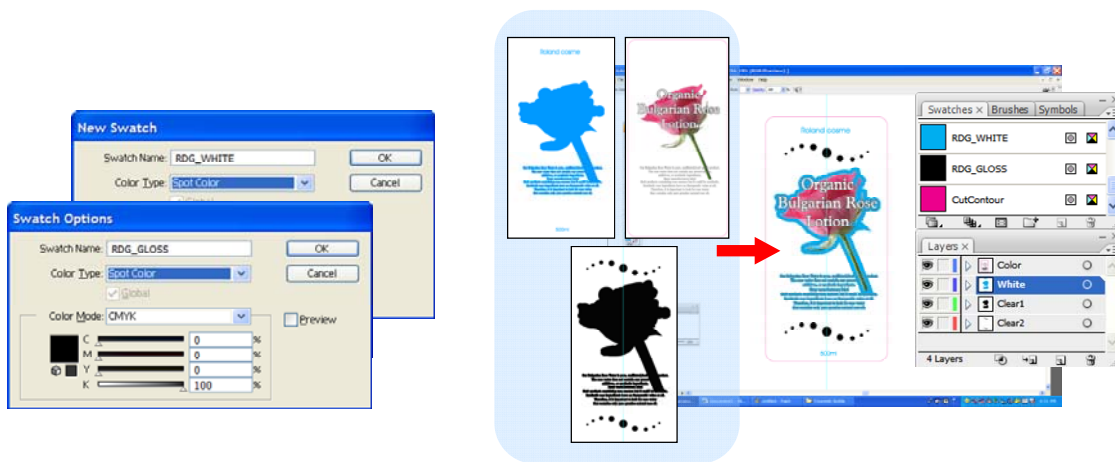


LEC-300 ships with the newest version of VersaWorks. VersaWorks 3.0 was written by Roland software engineers to take full advantage of LEC-300 capabilities with unmatched ease of use.

Roland VersaWorks 3.0 is built around the latest Adobe PostScript engine and supports printing to up to four Roland devices simultaneously. Available free of charge with the latest generation of printers, VersaWorks supports advanced color management features including the Roland Color System, a spot color matching system with built-in color communication tool which ensures 100% color accuracy.

Variable Data Printing for automated production of serial labels and advanced layout features such as tiling and nesting make VersaWorks the most powerful bundled RIP software in the industry.

VersaWorks recognizes unique design elements specific for white ink and clear coat and optimizes the output on the LEC-300.

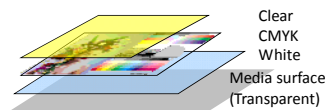
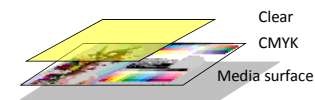


RDG_WHITE and RDG_GLOSS spot colors are recognized by VersaWorks and processed accordingly

VersaWorks features four printing modes for white and CMYK inks and three modes for clear coat which can be combined for unprecedented special effects.

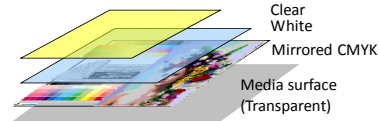
White and CMYK ink printing modes:

- CMYK
- Single Pass White and CMYK
- Single Pass CMYK and White
- White only



Clear coat printing modes:

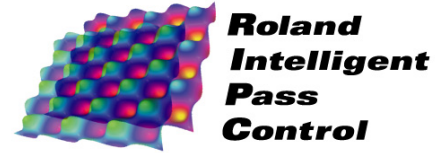
- Clear Coat with Gloss Finish
- Clear Coat with Matte Finish
- Embossing



VersaWorks 3.0 will be available free of charge for all existing users starting late September through Roland@NET, an automatic update system over the internet that keeps software always up-to-date.

Roland Intelligent Pass Control™

This technology was originally developed by Roland software engineers for the SOLJET PRO III series and is now optimized and fully implemented in the LEC-300. Roland Intelligent Pass Control™ is based on a 3-dimensional model for dot placement and creates masked patterns that ensure accuracy in filling in the smallest gaps between passes. The result is consistently smooth gradations and solid color fills with virtually no signs of banding across a wide range of media in every print mode.



Outstanding Print Quality

The LEC-300 raises the bar for print quality from a UV inkjet printer, producing stunning details and smooth gradients. The printer precisely controls droplet placement in both the print head travel and paper feed directions to provide up to 720x1440 dpi resolution.

The LEC-300 inherits the precision media feed and head carriage movement mechanisms from the award-winning SOLJET PRO III series for precision imaging. Variable droplet technology uses three drop sizes to allow for the right amount of ink to be deposited on the media at precisely the right time and in exactly the right place. This state-of-art implementation of piezoelectric print head technology delivers truly breathtaking output with beautifully smooth, band-free, dead-on accurate color and sharp text – even at high print speeds and on a wide range of media.

Advanced Media Take-Up System

The LEC-300 includes an automated media take-up system to facilitate precision unattended printing. This pre-assembled unit includes advanced tension-controlled take-up system for optimum media feed and tracking.

Two-Year Trouble-Free Warranty



Roland inkjets combine unbeatable performance with legendary Roland reliability. As further proof of their unmatched reliability, Roland offers a Two-Year Trouble-Free Warranty for the LEC-300 when equipped exclusively with Roland inks and the warranty registered within 60 days of delivery.

Summary

The new LEC-300 brings Roland innovation to the UV inkjet printing market for unmatched capability, print quality and ease-of-use. No other competitor in any price range comes close to the LEC-300's printing capabilities. The LEC-300 is extremely versatile, being able to produce special effects using white ink and clear coat and handles the most complex contour cutting applications, eliminating the tedious and expensive manual processes.

With the new Roland VersaUV LEC-300, customers get high-quality, value-added prints and ultra-efficient, workflow-integrated contour cutting.

For its unique printing capabilities, the LEC-300 is certain to attract both existing and new customers looking for cost effective and quicker turnaround solutions to replace their existing workflows.

Creative and innovative users will also see LEC-300 as a tool to increase their profitability by providing new services and bringing in-house the production of premium output that previously was only possible by outsourcing.