



Product Information Guide Roland VersaUV LEF-12

Overview

Roland Adds a New Dimension to its Award-Winning VersaUV Family of Printers

Roland is pleased to announce the addition of the VersaUV LEF-12, a 12-inch benchtop UV-LED flatbed printer, built on the same platform as the company's advanced and innovative VersaUV line of printers and printer/cutters. Combining award-winning print technology, advanced LED curing and exclusive ink saving features, the LEF-12 expands the VersaUV line to bring exceptional print quality and ease-of-use to new markets.

Priced at \$29,995, the new LEF-12 utilizes unparalleled UV printing capabilities to print directly on a vast array of substrates and three-dimensional objects, including giftware, awards, décor, packaging prototypes, and promotional and industrial products. One of the most advanced and affordable benchtop UV printers in its class, the LEF-12 has a maximum print area of 12 inches by 11 inches, and can handle solid objects up to 3.94 inches thick and 11 pounds in weight.

Roland Innovation Sparks Creativity and New Opportunities

The VersaUV LEF-12 goes beyond CMYK, adding white ink and clear coat for printing on a wide range of items, including thumb drives, pens, cell phone covers, laptops and more. Featuring multiple finishing options and clear coat to produce stunning graphics with high visual impact and unique dimensional effects, the LEF-12 is the ultimate tool for custom items and short-run production, or anywhere traditional screen printing or pad printing is used.

The VersaUV LEF-12 boasts several unique features that set it apart from other benchtop UV printers available in the market, including:

- **Outstanding print quality and color accuracy**
 - Proof-quality output of up to 1440 x 720 dpi
 - Exclusive Roland ECO-UV ink
- **Unique CMYK + White + Clear ink configuration**
 - White ink enhances images on clear and opaque substrates
 - Clear ink for unique three-dimensional embossing and textures
- **State-of-the-art UV LED curing system**
 - Allows for matte or gloss finishes
 - Long lasting and energy efficient
- **Designed to meet current and future environmental standards**
 - Ozone-free and safer UV-A light source
 - Built-in connection for air filtration system
- **Laser alignment system for quick and easy setup**
 - Two configurations ensure proper image placement
- **Mist filters reduce ink overspray**
 - Virtually eliminates overspray from settling on the internal components
- **Fully enclosed system**
 - Provides safe and clean operation
 - Offered with optional air filtration unit

Imagine.

**Pricing & Availability: VersaUVLEF-12 Benchtop Printer - \$29,995 U.S. List Price
Began shipping June 2011**

Key Features

VersaUV LEF-12

- State-of-the-art UV LED curing system
- Supports Roland ECO-UV Ink
- Unsurpassed substrate compatibility
- Patent-pending automated Ink Circulation System
- Roland Intelligent Pass Control™
- Auto detects material height
- Laser alignment system for quick and easy setup
- Mist filters to reduce ink overspray
- Fully enclosed system
- Optional matching air filtration system that doubles as a cart
- Designed for safe operation
- VersaWorks® RIP Software
- Roland OnSupport
- Two-Year Trouble-Free Warranty

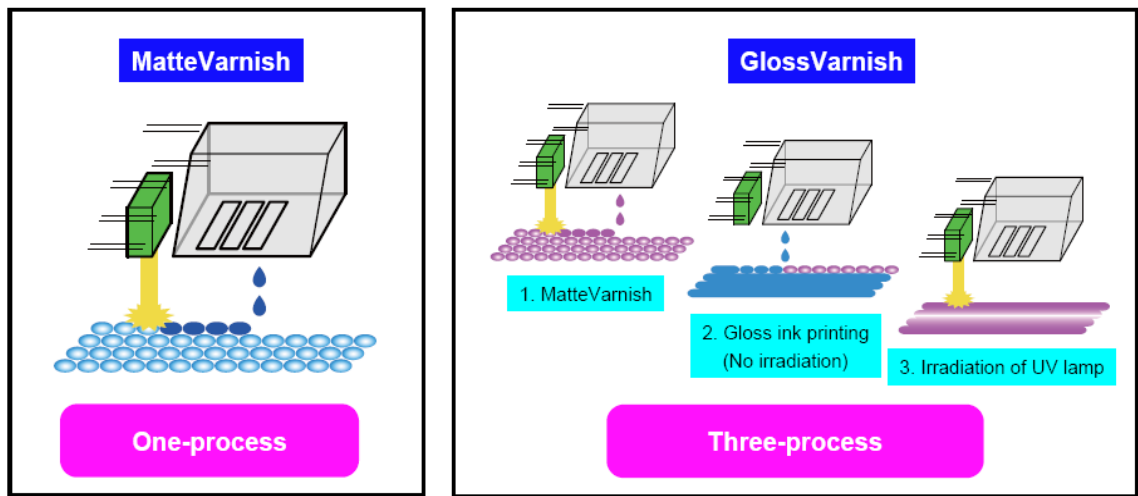
State-of-the-Art UV LED Curing System

The VersaUV LEF-12 includes an UV LED lamp that offers many advantages over conventional curing methods.

- Longer life – the LED lamp on the VersaUV series lasts up to 10,000 hours or 10 times longer than conventional UV lamps
- Low heat and highly energy-efficient – while conventional UV lamps can reach temperatures as high as 1500°F (800°C), LED lamps are extremely energy-efficient and generate very little heat. This virtually eliminates risks associated with high heat, such as damage to the substrate and head crashes caused by media deformation.
- 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 several 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 heat and UV radiation.

Equipped with a state-of-the-art LED curing system, the LEF-12 uses clear coat that allows for a choice of gloss or matte finishing. For normal or matte printing, the lamp is used to cure the ink in a single process. This configuration cures the ink droplets instantly to form a rough surface that scatters light. When gloss finish is

selected, the UV curing process is delayed, allowing droplets of clear coat to spread and form a smooth surface that reflects the light evenly.



Advanced ECO-UV Inks¹

ECO-UV ink was especially formulated for the VersaUV family of printers and printer/cutters to deliver high color density and wide gamut for exceptional images print after print. Clear coat can produce an unprecedented high gloss finish and improve scratch and chemical resistance and outdoor durability. ECO-UV ink is perfect for applications such as promotional products, giftware, awards, and packaging and prototypes. In outdoor applications, ECO-UV ink lasts up to two years when flooded with clear coat, and up to six months unprotected.



Unsurpassed Media Compatibility

ECO-UV ink adheres to a wide range of treated and untreated substrates, including PVC, PET, ABS, acrylic, wood, glass and more, providing exceptional image quality.²

The low heat UV LED lamp allows for printing on heat-sensitive media such as PVC, pressure-sensitive media and paper stocks without risk of damaging the substrate.

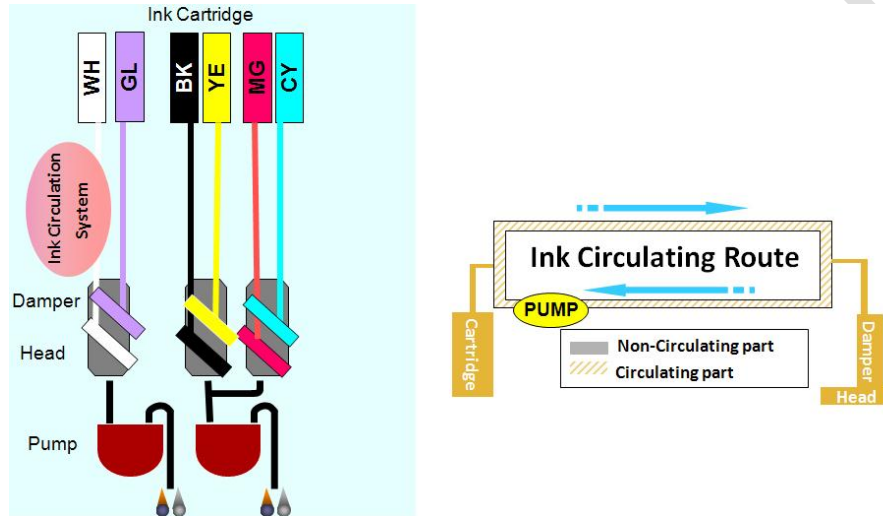
The ingenious combination of advanced ECO-UV inks with a low heat, state-of-the-art UV LED lamp enables VersaUV printers to print on virtually any substrate delivering an unprecedented range of media compatibility and print quality.

¹ Room ventilation and Roland approved air filtration system are required. Please consult the MSDS for more guidance on the proper use of ECO-UV inks.

² Some materials such as metal and glass may require a primer for better UV ink adhesion. Objects with highly reflective surfaces such as stainless steel and mirrors should be avoided to prevent damages to the print heads by reflected UV light.

Patent-Pending Automated Ink Circulation System

It is a well-known fact that white ink contains heavy pigments that can settle over time, decreasing the density of white output and affecting the nozzles if not purged from the system periodically. This innovative patent-pending system circulates the white ink to prevent the settling of pigments in the lines. In addition, this system controls the discharge of white ink and minimizes waste by monitoring white ink usage and the types of jobs that are printed. An ink discharge cycle will not be executed unless all of the following conditions are met: (1) the printer receives a job with white data, (2) eight hours or more have passed since the last ink discharge, (3) less than 3.75 ml of white ink has been consumed during the eight hour period needed for circulation. Operators can further optimize the ink usage by scheduling the production of jobs with white data within this eight-hour window.



By preventing unnecessary discharges and minimizing the amount of ink that is subject to settling, this automated system significantly reduces ink waste and virtually eliminates all manual white ink maintenance procedures. Note that the white ink cartridge still needs to be shaken prior to use each day, as the ink in the cartridge is not circulated by this system.

Roland Intelligent Pass Control

Roland Intelligent Pass Control technology developed by Roland software engineers represents the pinnacle of inkjet printing. This patent-pending system precisely controls dot placement between passes and delivers unprecedented imaging performance in all resolutions. The VersaUV LEF-12 produces smooth gradations and solid colors, while achieving virtually no banding in all print modes.



Auto Detection of Material Height

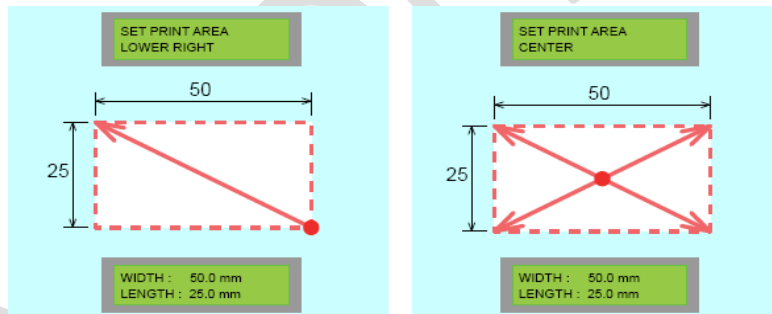
The VersaUV LEF-12 is designed to automatically raise or lower the flatbed table using the device's advanced surface scan function to auto detect materials up to 3.94 inches thick, and adjusts the printable surface to the ideal distance for optimal quality. The height of the table can also be set manually and confirmed using the surface scan function to avoid strikes that can damage the print head.

Laser Alignment System³

Borrowing from Roland's proven engraving technology, the LEF-12 includes a built-in laser alignment system that allows for quick and easy setup of the device, enabling it to print on a variety of items, including thumb drives, cell phone covers, iPad covers, awards, laptops and more.

To ensure proper image placement, there are two methods for setting the laser's point of origin, including:

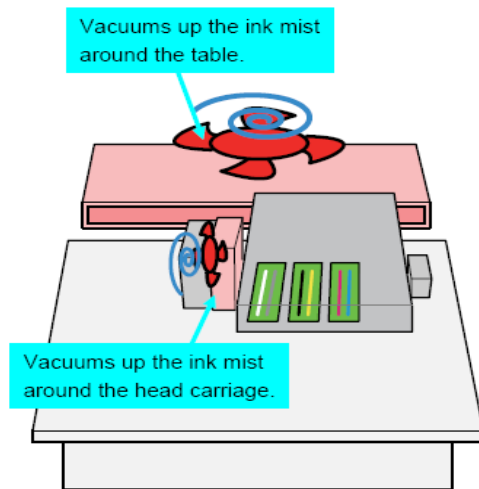
- Two-point reference – This method uses the lower right and upper left corner of the object as a reference point to generate a bounding box that can be read by Roland's VersaWorks to ensure proper image placement for printing on a variety of standard sized objects.
- Center origin – Typically used for circular, curved or odd shaped items, this method requires the user to manually input the dimensions of the printable item into VersaWorks to set the reference point for the laser and ensure proper image placement.



Mist Filters Reduce Ink Overspray

The only benchtop UV printer to incorporate mist filters, LEF-12 has one located on the rear of the unit and the other situated between the print head and the UV lamp. These filters are designed to catch any residual ink that may be oversprayed when printing off the edge or on curved surfaces, virtually eliminating failures caused by ink depositing on other internal components of the printer. Both filters can be easily reached and serviced by the end-user as needed

³ Printing on curved surfaces or objects with large reliefs, or setting a print area that is bigger than the object may cause excessive ink overspray and reflected UV light which may damage the print heads. In order to minimize these problems, the print area must be set to the minimum necessary and exclude areas that are uneven. The use of templates (or jigs) with pockets that enclose the object is highly recommended. Please consult the manual "VersaUV LEF-12 Important points to check before printing (Measures for ink mist and UV reflected light)" for proper use of LEF-12.



Fully Enclosed System

The VersaUV LEF-12 is the only fully enclosed benchtop UV printer in its class. This enclosed system eliminates the risk of UV light exposure to the eyes and skin, while virtually eliminating dust and debris as well the odor of the UV inks. Additionally, no moving parts are exposed, making it safe to operate.



Optional Air Filtration Unit

An optional air filtration system has been custom built for use with Roland's VersaUV LEF-12, virtually eliminating odors related to the use of UV inks. Designed specifically for the LEF-12, the filtration unit also doubles as a cart for the printer, and is equipped with an internal shelf for storing jigs, fixtures and supplies.

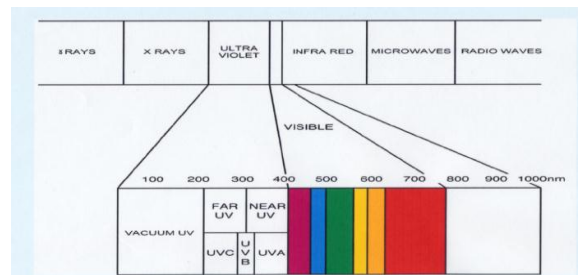


Designed for the Environment and Safety

The energy-efficient VersaUV series uses only a fraction of the power used by a conventional UV printer and automatically enters a low-power mode when it is not used for an extended period of time. This energy-efficient design literally saves thousands of dollars in electric bills each year and reduces considerably the emission of greenhouse gases. And because the LED lamp does not require any warm up time, the LEF-12 enables you to be up and running quicker.

Traditional UV curing equipment can expose operators to harmful ozone, UV-B and UV-C radiation. Ozone is a known air pollutant that can cause lung damage and respiratory problems. UV-B and UV-C radiation can cause eye damage, skin cancer and accelerated skin aging. The LED lamp on the VersaUV LEF-12 is completely ozone-free and only emits the much safer UV-A radiation.

The VersaUV LEF-12 is ventilation-ready, featuring a built-in connector for use with any air filtration system.



Metal Halide Lamp LED

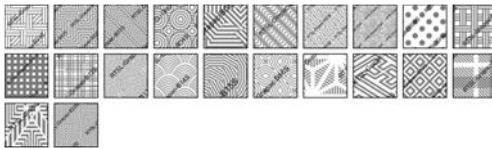
Roland VersaWorks RIP Software



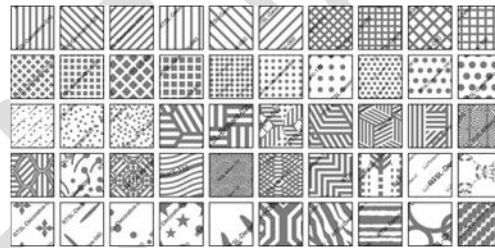
VersaWorks RIP software has been exclusively developed for Roland inkjet printers and printer/cutters. This true Adobe PostScript 3 RIP ensures exceptional production output with unmatched ease of use.

VersaWorks incorporates the latest Adobe CPSI engine 3019 for faster processing, better color and smoother gradations and can control up to four Roland devices including GX series cutters.

VersaWorks features the Roland Color System for spot color matching, Variable Data Printing for customized job output, ink consumption and print time estimation, and the Max Impact preset for richer color contrast, outstanding image quality and maximum productivity. VersaWorks also includes the Roland Texture Library featuring 72 ready-to-use textures that can be applied to designs by layering the clear coat ink.



GRAPAC Bri-O-Coat Library



Roland Texture Library

Roland OnSupport



Roland OnSupport is an online support portal that provides real time feedback on the user's machine. This system monitors ink levels and provides access to manuals and software updates, how-to guides, preventive maintenance guides, machine usage metrics and periodic updates to firmware. It sends notifications to the user's cell phone or e-mail address and allows the user to both manage their productivity and gain direct feedback from Roland.

Two-Year Trouble-Free Warranty



Roland inkjets combine unbeatable performance with legendary Roland reliability. As further proof, Roland offers a Two-Year Trouble-Free Warranty for the VersaUV LEF-12 when equipped exclusively with Roland inks and the warranty is registered within 60 days of delivery.

Summary

In September of 2008, Roland introduced the VersaUV LEC-300, revolutionizing the UV inkjet printer market with its unprecedented print quality, innovative printing and curing technology such as gloss, matte and embossing finishing options, as well as its low heat and safe LED curing system. In 2009, Roland introduced further improvements with its exclusive automated Ink Circulation System to dramatically reduce waste ink and the overall cost of operation.

Since the introduction of Roland's first UV inkjet printer, no other printer line on the market today has been able to match the capabilities and advanced features the VersaUV family offers. Beyond the technical benefits of white ink, finishing options with clear coat, and an automated Ink Circulation System, the business opportunities afforded to new and existing Roland owners using the VersaUV family of printers and printer/cutters are just as exciting.

Combining award-winning UV print technology with innovative, benchtop flatbed design, the VersaUV LEF-12 demonstrates Roland's ongoing commitment to the success of its customers by developing market-leading technology that allows them to expand their capabilities and access new markets. Delivering unparalleled UV printing capabilities, the LEF-12 facilitates direct printing on a vast array of substrates and three-dimensional items to provide exceptional high quality output on a wide range of giftware, awards, packaging, prototypes, and promotional and industrial products. We expect the excitement generated by the introduction of the new VersaUV LEF-12 to resonate with loyal Roland customers and new users, resulting in new sales opportunities.

Happy Selling!

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