

HIGH THROUGHPUT SLIDE ULTRAVIOLET (UV) PRINTER



High Throughput Slide Ultraviolet (UV) Printer - ToronPath™ SP-140UV

ToronPath™ SP-140UV is a professional slide UV printer engineered for clinical and research laboratories that require precise, permanent slide identification using the latest ultraviolet laser printing technology.

As a fully integrated slide printer, this instrument prints high-resolution text, symbols, barcodes, QR codes, and graphics directly onto the coating of standard microscope slides — without any ribbons, ink, or consumables beyond the slides themselves. Its built-in operating system enables complete stand-alone operation, while its robust construction and chemical-resistant output make it an ideal long-term solution for histopathology, cytology, and anatomical pathology environments. The ToronPath™ SP-140UV slider UV printer combines high loading capacity (up to 140 slides), a large output bin (up to 150 slides), and an intuitive touchscreen interface for seamless daily use.

APPLICATIONS

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Applications

The ToronPath™ SP-140UV is designed for use in:

- Histopathology and anatomical pathology laboratories requiring permanent slide identification
- Cytology departments utilizing barcode and QR code-based specimen tracking
- Clinical laboratories with LIS, HIS, PIS, or PACS system integration
- Research institutions requiring long-term archiving of labeled slides
- Facilities using tissue cassette scanners for multi-source data input
- Environments requiring light-absorption-safe slide printing (no light reflection or pollution)



FEATURES

High Throughput Slide Ultraviolet (UV) Printer - ToronPath™ SP-140UV

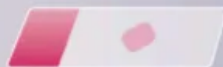
Key Features

- UV laser printing technology: latest-generation UV laser for consumable-free, permanent slide marking with no ribbons, ink, or laser powder required
- Ultra-high print resolution: extremely small laser spot size enabling 2500 dpi output for crisp QR codes, barcodes, text, symbols, and graphics
- High loading capacity: maximum loading capacity of 140 slides per cycle for extended unattended operation
- Large output collection: maximum output collection capacity of 150 slides, supporting high-volume batch workflows
- Flexible printing modes: supports small-batch printing, large-batch printing, and scan-then-print workflows via synchronous preview function
- Zero consumable cost: no ribbons, ink, or laser powder needed; the slide is the only consumable, minimizing ongoing operating costs
- Chemical-resistant output: printed markings withstand xylene, alcohol, and other laboratory solvents, ensuring long-term specimen integrity
- Clearly prints text, symbols, digits, graphics, barcodes, and high-resolution QR codes
- 10.1-inch full-color LCD touchscreen: large, intuitive display for comfortable daily operation
- Built-in operating system: fully stand-alone; no external computer required
- Multiple information input methods: touchscreen entry, tissue cassette scanner, remote network, and LIS/HIS system integration
- Light-absorbing material design: minimizes light reflection and light pollution during the printing process
- Professional slide loading/output device compatible for automated workflow integration
- LIS/HIS/PIS/PACS compatible: integrates with commonly used hospital and laboratory information systems
- Built-in composite air treatment function for a cleaner printing environment

Powerful Functionality

Specimen Slide Printing Function

Pre-sealed specimen slides can be printed directly



Reprint Function

If printing is unclear, slide can be printed again with reprint



Double Patients Number Printing Function

It supports two patients numbers in one slide, which meet the needs of information-based end-to-end management



Mini Thermal Printer

High-quality Printing

- Clear, high-contrast prints with 1s scan & recognition
- Supports standard & immunohistochemistry slides
- Capable of printing on various sizes of slides
- Fully compatible in printing on colored slides/tissue cassette, fully compatible



Environmentally Friendly

- Eco-friendly printing, dust & chemical odor-free
- Low noise for a comfortable working environment
- Advanced tech & materials for energy saving & emission reduction



Information Technology

■ Data Transmission

- Wi-Fi, USB, Bluetooth, Ethernet, Serial Interface, etc.

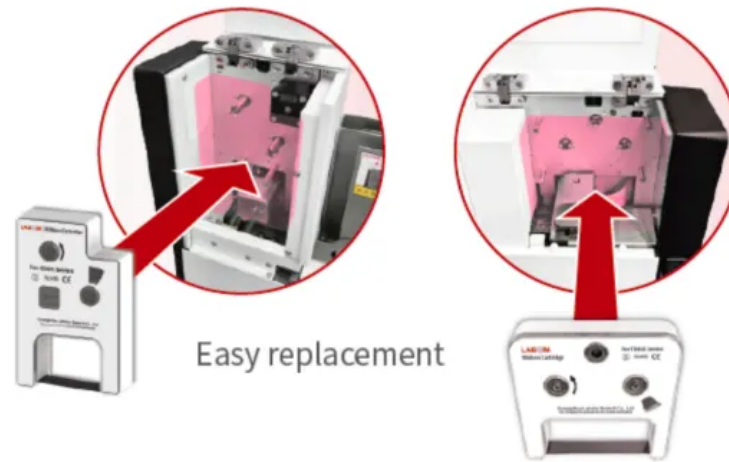
■ Diverse Information Transmission Capabilities

- Supports transmission protocols such as LIS/HIS/PIS/PACS
- Supports custom proprietary protocols



3-Second Ribbon Replacement

- Modular ribbon cartridge design
- 3-second rapid ribbon replacement



Smart & Small

- Width $\leq 110\text{mm}$

— Intelligent —



① Printer Owns Built-in Scanning Module

Scanning module
controlky software



② Innovative LED Strip Design

- Green** Normal operating status
- Yellow** Consumable is low supply
(glass slide, carbon ribbon, etc.)
- Red** Warning

THEORY & METHOD

Theory and Method

The ToronPath™ SP-140UV uses UV laser printing technology to permanently engrave identification data directly onto the coating of standard glass microscope slides. A finely focused UV laser beam produces an extremely small laser spot, enabling high-resolution output at 2500 dpi. The non-contact printing process requires no ribbons, ink cartridges, or laser powder — the slide itself is the only consumable.

Because the engraving process is chemical in nature (photochemical interaction with the slide coating), the resulting marks are fully resistant to xylene, alcohol, and other harsh laboratory solvents, ensuring long-term preservation. The printer supports multiple information input methods, including direct entry via the touchscreen, tissue cassette scanner input, remote network connection, and integration with LIS/HIS systems. Light-absorbing materials are incorporated into the design to prevent light reflection and minimize light pollution during printing.

TECHNICAL SPECIFICATIONS

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Technical Specifications

Printing Technology	UV Laser Printing
Printing Resolution	2500 dpi
Print Speed	≤ 5 seconds per slide
Loading Capacity	≥ 140 slides (maximum)
Output Collection Capacity	≥ 50 pcs / 100 pcs / 150 pcs (optional configurations)
Data Transmission	USB, Ethernet, Serial Ports
Display	10.1-inch Full-Color LCD Touchscreen
Information Input Methods	Touchscreen, Tissue Cassette Scanner, Remote Network, LIS/HIS
Operating System	Built-in (stand-alone, no external computer required)
System Compatibility	LIS / HIS / PIS / PACS
Printable Content	Characters, Letters, Symbols, Barcodes, QR Codes, Graphics

Chemical Resistance	Xylene, Alcohol, and Other Laboratory Solvents
Consumables	None (non-contact UV laser technology; slide only)
Light Management	Light-Absorbing Material – reduces reflection and light pollution
Air Treatment	Built-in Composite Air Treatment Function
Dimensions (W × D × H)	275 mm × 457 mm × 517 mm



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