



TORONTECH

HIGH SPEED TISSUE CASSETTE ULTRAVIOLET (UV) PRINTER



High Speed Tissue Cassette Ultraviolet (UV) Printer — ToronPath™ TC-UV

ToronPath™ TC-UV is a professional tissue cassette ultraviolet printer developed for anatomic pathology, histology, and clinical laboratory environments that require ultra-high-resolution cassette identification. Utilizing the latest UV laser printing marking technology, this tissue cassette UV printer produces extremely precise, chemically resistant markings — including complex QR codes and barcodes — directly on the surface of standard tissue processing cassettes without the use of ribbons, inks, or external consumables.

Engineered for reliability and throughput, the ToronPath™ TC-UV tissue cassette printer combines a fully integrated standalone computing platform, a 10.1-inch full-color LCD touchscreen, a sliding rail output system, and native LIS/HIS/PIS/PACS connectivity. The result is a cassette printer pathology solution that seamlessly integrates into modern pathology information workflows while delivering permanent, archive-quality specimen identification.

APPLICATIONS

High Speed Tissue Cassette Ultraviolet (UV) Printer — ToronPath™ TC-UV Applications

The ToronPath™ TC-UV tissue cassette UV printer is designed for:

- High-volume anatomic and surgical pathology laboratories requiring rapid, consumable-free cassette labeling
- Histology and histopathology departments in hospitals and academic medical centers
- Pathology information system (PIS) integrated workflows with LIS/HIS/PACS connectivity requirements
- Biobanks and tissue archive facilities where long-term cassette identification integrity is critical
- Reference laboratories processing large cassette volumes with batch and on-demand print modes
- Research institutions requiring high-density QR code printing for specimen traceability and data capture

- Veterinary and specialty pathology laboratories requiring durable cassette identification



FEATURES

High Speed Tissue Cassette Ultraviolet (UV) Printer — ToronPath™ TC-UV

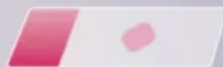
Key Features

- Latest UV laser printing marking technology enables ultra-high-resolution output, meeting the stringent demands of pathological information systems
- Print resolution of 2,500 dpi supports reliable reproduction of high-density QR codes, 1D barcodes, alphanumeric text, symbols, and graphic elements on tissue cassettes
- Chemically resistant imprint — markings withstand immersion in xylene, alcohol, and decalcifying fluid for long-term archival preservation
- Two selectable output collection modes: Print-in-Big-Batches for uninterrupted high-volume runs and Print-after-Scanning for individual specimen workflow — switchable to match laboratory needs
- Integrated tissue cassette printing system with synchronous print preview function for real-time verification before printing
- Sliding rail output collection system automatically collects and organizes printed cassettes after each print cycle
- Output collection capacity of ≥ 28 cassettes per cycle; loading capacity of ≥ 6 cassette slots for continuous operation
- Built-in barcode scanner supports direct cassette scanning and verification at the point of labeling
- 10.1-inch full-color LCD touchscreen for intuitive operation, queue management, and workflow status monitoring
- Fully standalone integrated design with built-in computer and operating system — no external PC or workstation required
- Compatible with LIS, HIS, PIS, PACS, and other commonly used hospital and laboratory information systems
- Built-in composite air treatment function for safe laboratory environment during UV laser marking operations
- Non-contact laser technology with no consumable costs beyond the tissue cassettes themselves
- Print speed of ≤ 4 seconds per cassette supports clinical throughput requirements

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.

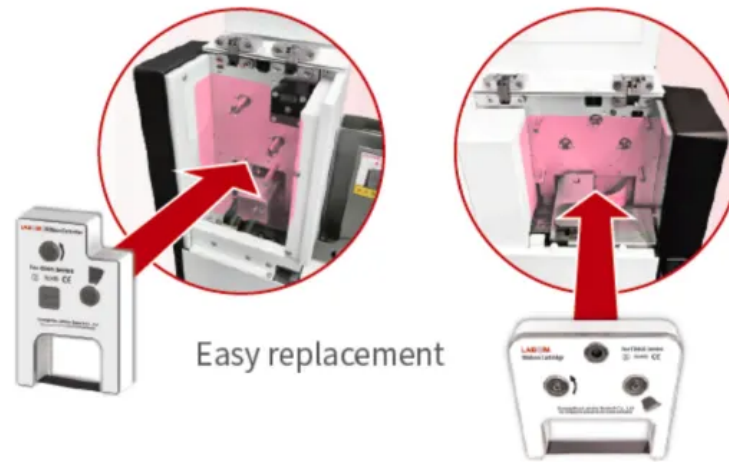
■ Diverse Information Transmission Capabilities

- 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™ TC-UV employs the latest UV laser printing marking technology to permanently identify tissue processing cassettes. A precision UV laser beam is directed onto the cassette surface, where it photo-chemically reacts with the cassette material to create a high-contrast, deeply embedded mark. Because the process is purely optical and non-contact, no inks, ribbons, or toners are deposited onto or near the cassette, eliminating any risk of specimen contamination from

printing consumables.

Operating at 2,500 dpi resolution, the system reproduces ultra-high-resolution patterns — including dense 2D QR codes, 1D barcodes, alphanumeric text, and laboratory symbols — with exceptional clarity on the compact surface area of a standard tissue cassette. The high-definition output supports pathological information system requirements for machine-readable identification at every step of specimen processing.

The integrated tissue cassette printing system features a synchronous preview function, allowing the operator to verify the print layout before committing to a batch run. The system supports two workflow modes: print-after-scanning for individual specimens and large-batch printing for high-throughput sessions. A sliding rail output mechanism ensures printed cassettes are gently and automatically collected in sequence, ready for immediate downstream processing. The built-in composite air treatment system captures laser-generated particulates at the source.

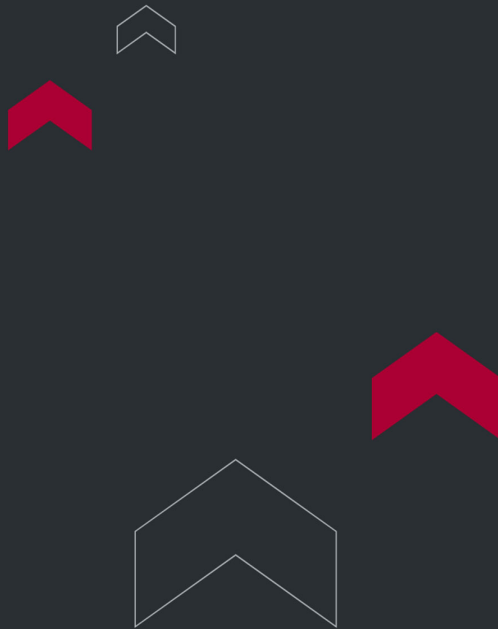
TECHNICAL SPECIFICATIONS

High Speed Tissue Cassette Ultraviolet (UV) Printer — ToronPath™ TC-UV

Technical Specifications

Parameter	Specification
Product Name	High Speed Tissue Cassette Ultraviolet (UV) Printer — ToronPath™ TC-UV
Printing Technology	UV laser printing marking (non-contact, consumable-free)
Print Resolution	2,500 dpi
Print Speed	≤ 4 s / cassette
Loading Capacity	≥ 6 cassette slots
Output Collection Capacity	≥ 28 cassettes

Parameter	Specification
Output Collection System	Sliding rail collection for organized post-print takeout
Display	10.1-inch full-color LCD touchscreen
Data Transmission	USB, Ethernet, Serial ports
Barcode Scanner	Built-in
Print Preview	Synchronous preview function (verify before printing)
Printable Content	Text, letters, symbols, barcodes, QR codes, and other information
Chemical Resistance	Resistant to xylene, alcohol, and decalcifying fluid
System Compatibility	LIS / HIS / PIS / PACS and other hospital information systems
Operating System	Built-in (standalone, no external computer required)
Air Treatment	Built-in composite air treatment function
Dimensions (W × D × H)	430 × 531 × 467 mm
Voltage	100–240 V AC, 50/60 Hz (international standard)



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