

HIGH-THROUGHPUT TISSUE CASSETTE UV PRINTER



High-Throughput Tissue Cassette UV Printer — ToronPath™ TC-100UV

ToronPath™ TC-100UV is a high-performance tissue cassette ultraviolet (UV) printer engineered specifically for the demands of anatomic pathology and histology laboratories. Powered by UV laser printing technology, this cassette printer pathology solution delivers exceptionally sharp, permanent markings directly onto standard tissue processing cassettes — without ribbons, inks, or consumable cartridges.

Designed for high-throughput clinical environments, the ToronPath™ TC-100UV tissue cassette printer integrates a fully standalone computing platform with a 10.1-inch full-color LCD touchscreen, dual collection fitting modes, and broad LIS/HIS/PIS/PACS compatibility. The printed output is resistant to xylene, alcohol, and decalcifying solutions, ensuring reliable cassette identification throughout the entire tissue processing workflow.

APPLICATIONS

High-Throughput Tissue Cassette UV Printer — ToronPath™ TC-100UV Applications

The ToronPath™ TC-100UV tissue cassette ultraviolet (UV) printer is designed for use in:

- Anatomic pathology and surgical pathology laboratories requiring high-volume cassette labeling
- Histology and histopathology departments in hospitals, academic medical centers, and reference labs
- Biobanks and tissue repository facilities demanding permanent, chemically resistant specimen identification
- Veterinary pathology laboratories processing tissue specimens
- Research institutions requiring traceable, high-resolution cassette identification with QR code support
- Pathology information system (PIS) integrated workflows where direct LIS/HIS/PACS connectivity is essential



FEATURES

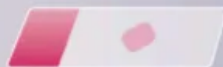
High-Throughput Tissue Cassette UV Printer — ToronPath™ TC-100UV Key Features

- UV laser printing technology — non-contact, consumable-free operation; no ribbons, inks, or toners required
- Ultra-high print resolution of 2,500 dpi enables clear rendering of text, symbols, barcodes, and high-density QR codes on tissue cassette surfaces
- New UV laser design with a very small laser spot delivers higher fineness and can clearly print extremely high-resolution QR codes and associated data fields
- Chemically resistant imprint — printed markings withstand exposure to xylene, alcohol, and decalcifying fluids, ensuring specimen identity is preserved throughout tissue processing and long-term archival
- Two selectable cassette collection modes: bulk batch collection for high-throughput runs or real-time individual collection for urgent cases — switchable to match laboratory workflow
- Output collection capacity of ≥ 100 cassettes per cycle, supporting uninterrupted batch printing operations
- Loading capacity of ≥ 6 cassette slots for continuous, unattended operation
- Built-in barcode scanner for direct cassette scanning and verification at the point of printing
- 10.1-inch full-color LCD touchscreen interface for intuitive operation, real-time status monitoring, and print preview
- Fully integrated standalone design with built-in computer and operating system — no external PC or network workstation required
- Compatible with LIS, HIS, PIS, PACS, and other hospital and laboratory information management platforms
- Built-in composite air treatment function captures laser ablation particulates, maintaining a safe laboratory air environment
- Equipped with a dedicated tube/collector assembly for organized output of printed tissue cassettes
- Print speed of ≤ 3 seconds per cassette supports high-throughput production environments

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.

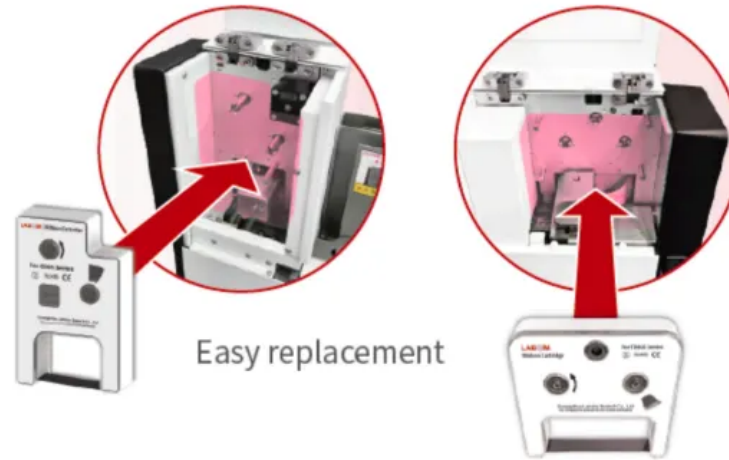
■ Diverse Information Transmission Capabilities

- 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-100UV employs UV laser printing technology to mark tissue processing cassettes. A focused UV laser beam ablates or photo-chemically reacts with the surface of the cassette, creating a permanent, high-contrast imprint that is fully integrated into the cassette material rather than applied as an external coating or ink layer.

The UV laser spot is extremely small, enabling ultra-high-resolution output at 2500 dpi. This allows the system to reliably print complex data — including human-readable text, alphanumeric characters, symbology (1D barcodes), and high-density 2D QR codes — within the compact printing area of a standard tissue cassette. Because no consumables (ribbons, inks, toners) contact the cassette, contamination risk is eliminated.

An integrated circulation system manages air quality within the printing chamber through a built-in composite air treatment unit, capturing particulates generated during the laser ablation process. The standalone embedded operating system manages print queue, LIS/HIS integration, cassette output collection, and user interface — all without requiring an external computer or workstation.

TECHNICAL SPECIFICATIONS

High-Throughput Tissue Cassette UV Printer — ToronPath™ TC-100UV
Technical Specifications

Parameter	Specification
Product Name	High-Throughput Tissue Cassette UV Printer — ToronPath™ TC-100UV
Printing Technology	UV laser printing (non-contact, consumable-free)
Print Resolution	2,500 dpi
Print Speed	≤ 3 s / cassette
Loading Capacity	≥ 6 cassette slots
Output Collection Capacity	≥ 100 cassettes
Display	10.1-inch full-color LCD touchscreen
Data Transmission	USB, Ethernet, Serial ports

Parameter	Specification
Barcode Scanner	Built-in
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
Cassette Collection	Tube/collector for organized cassette output
Dimensions (W × D × H)	313 × 477 × 509 mm
Voltage	100–240 V AC, 50/60 Hz (international standard)



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