

PSC-GP Series Pharmaceutical Stability Test Chamber

0~65°C (Illumination range: 15~50°C)
| No Humidity Control

LAB1ST PSC-GP Series is a specialized pharmaceutical stability test chamber designed for strong light exposure testing under controlled temperature conditions (0~65°C, with illumination active between 15~50°C).

It delivers reliable performance for photostability testing of pharmaceuticals, packaging materials, raw substances, etc.



Features

> Energy-Efficient & Eco-Friendly Design

- Fluorine-free refrigeration system for high efficiency, low energy consumption, and environmental sustainability.

> Advanced Control & Monitoring System

- Standard Illuminance Monitor with top-mounted lighting and manual stepless dimming
- 5-inch Touchscreen Programmable Controller supporting 100 programs, 1000 segments, and 999 cycles, with maximum duration of 99 hours 59 minutes per segment
- Dual International Brand Compressors with automatic switching for continuous, uninterrupted operation
- Advanced PID Auto-Tuning ensures precise and stable temperature and humidity control
- Microcomputer Servo Controller with digital temperature and humidity display for accurate real-time monitoring
- Frost-Free Continuous Operation technology eliminates defrost cycles, preventing temperature and humidity fluctuations during critical tests
- Bilingual Interface (Chinese/English) with real-time curve display

> Superior Chamber Design & Construction

- High-Grade 304 Stainless Steel Interior featuring smooth, radiused corners for effortless cleaning and optimal contamination control
- Advanced Airflow Duct System delivering exceptional air circulation uniformity throughout the entire workspace
- 25mm Access Port conveniently located on the left side for easy sensor integration and monitoring

> Compliance with International Standards

- Comprehensive Testing Protocol Support: Fully compliant with ICH and other international regulatory guidelines for pharmaceutical stability testing, including:
 - Accelerated Testing: 40°C ±2°C / 75%RH ±5%RH or 30°C ±1°C / 60%RH ±5%RH (180 days)
 - Long-Term Testing: 25°C ±2°C / 60%RH ±5%RH or 30°C ±2°C / 60%RH ±5%RH (365 days)
 - Accelerated Testing for Semi-Permeable Packaging (e.g., LDPE infusion bags, plastic ampoules, ophthalmic containers): 40°C ±2°C / 25%RH ±5%RH
 - Long-Term Testing for Semi-Permeable Packaging: 25°C ±2°C / 40%RH ±5%RH or 30°C ±2°C / 35%RH ±5%RH
 - Strong Light Exposure Test: 4500 ±500Lx (10 days)

> Comprehensive Safety & Alarm System

- Independent Temperature Limit Alarm with audible and visual alerts for immediate hazard notification
- Multi-Level Protection System including compressor overheat, fan overheat, over-temperature, over-pressure, overload, and water shortage protection
- Dual-Direction Alarms for both high/low temperature and humidity deviations from set parameters
- Password-Protected Screen Lock to prevent unauthorized access and operation
- Hierarchical Access Management featuring multi-user accounts with three permission levels (Administrator, Operator, Visitor), supporting personalized login with detailed operation logs for audit trail compliance
- Automatic Safety Shutdown that stops air circulation and heating when chamber door is opened, preventing temperature overshoot and ensuring operator safety

> Reliable Components & Sensors

- Internationally Renowned Brand Components for temperature/humidity controllers, compressors, and circulating fans.
- High-Temperature Resistant Humidity Sensor eliminates frequent replacement of wet wicks.

> Data Recording & Communication

- Standard RS485 Communication & Embedded Printer for real-time data logging and remote monitoring.
- PC Software Support for programming, monitoring, and remote control.
- Fault Diagnosis Display for clear and immediate error identification.

Specification

Model	PSC-150L-GP	PSC-250L-GP	PSC-400L-GP
Temp. Control Range	0~65°C (With illumination 15~50°C)		
Temp. Fluctuation/Uniformity	±0.5°C/±2°C		
Illumination Intensity/Error	0~6000LX Adjustable ≤±500LX (Stepless dimming)		
Timer Range	Each segment 1~99 hours		
Temp. & Humidity Control Method	Balanced temperature control method		
Refrigeration System/Method	Two independent sets of fully hermetic compressors, auto-switch, international brand		
Controller	Programmable touch screen controller		
Sensor	Pt100 platinum resistor; Capacitive humidity sensor		
Ambient Operating Temp.	+5~30°C		
Power Supply	AC220V 50HZ		
Operating Power (approx.)	~450 W	~450 W	~600 W
Rated Power	1450 W	1700 W	3200 W
Chamber Volume	150 L	250 L	400 L
Inner Dimensions (W×D×H, mm)	550×405×670	600×500×830	700×550×1140
External Dimensions (W×D×H, mm)	690×805×1530	740×890×1680	950×850×1850
Standard Shelves/Trays	3 pcs	3 pcs	4 pcs
Built-in Printer	Yes		
Safety Devices	Compressor overheat protection, Fan overheat protection, Over-temperature protection, Compressor overpressure protection, Overload protection, Water shortage protection		
Communication Interface	485 interface		
Test Port	25mm test port		

Performance parameters are tested under no-load conditions at an ambient temperature of 20°C and ambient humidity of 50% RH. Operating power is measured under stable operating conditions at 25°C and 65% RH.

Options

Paperless Recorder (Universal Type)

UV Sterilization System

International Brand SDR100
Paperless Recorder (2/4/6 Channels)

3Q Validation and Calibration Services

Wired Monitoring and Alarm System

USB Interface for Data Export

Shelf-Mounted Lighting (per shelf)

UV Control with 320–400 nm UV lamps and UV irradiance monitor (Refer to Appendix 1)

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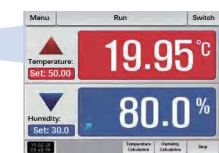
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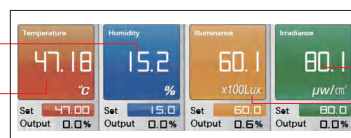
Appendix 1: UV Monitoring and Control (optional)



Programmable Touch Controller

Humidity

Temperature



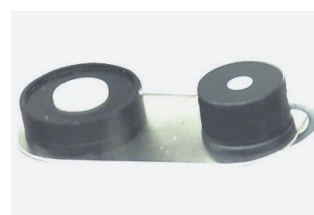
Multi-channel Touchscreen Display

Ultraviolet (UV)

Illumination / Light



Lamp Holder Operational under High-Humidity Conditions



High-Precision Sensor for Intense Light & UV

Features

> Lighting System

- Complies with ICH Q1B photostability testing standards as well as relevant international manufacturing standards.
- Configurable visible & UV lamps (shelf/door-mounted), independently controllable, with the option of single or double layers for each type.
- Adjustable sample shelf height within the workspace (optional for dual-layer lower lighting systems).

> Irradiance Display, Monitoring, and Control

- Enabling real-time irradiance display and monitoring.
- Reduces experimental errors from lamp aging.
- Supports stepless adjustment of light intensity according to user requirements.
- Equipped with visible and UV light sensors, along with third-party certified irradiance monitors, for convenient observation and calibration.

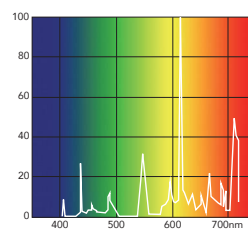
> Professional UV Lamps

- Specialized UV lamps meet ICH Q1B requirements for photostability testing, offering stable quality and uniform spectral power distribution compared to conventional UV lamps.
- Spectral power distribution remains consistent without attenuation over the lamp's lifespan, ensuring reproducible test results.
- UV lamp sockets are designed to operate reliably under high-humidity conditions.

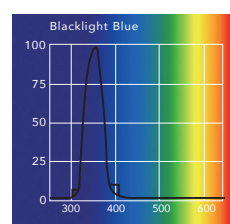
Key Specifications

- > **Light Intensity:** Adjustable cool white 0–6000 Lux (±500 Lux); adjustable UV intensity
- > **UV Spectral Range:** 320–400 nm
- > **Standards:** ICH Q1B guidelines; cool white $\geq 1.2 \times 10^6$ Lux·hr; near-UV ≥ 200 W·hr/m²
- > **Standard Light Sources:** Cool white lamps (D65, 6500K) and UV lamps (320–400nm)

ICH Light Source Distribution and Absorption



Absorption occurs in the visible light range (400-840nm)



Absorption is present in the ultraviolet range (320-400nm)