PSC-G Series

Pharmaceutical Stability Test Chamber

0~65°C (Illumination range: 15–50°C)
| 25~95%RH, ±2°C~±3°C

LAB1ST PSC-G Series Pharmaceutical Stability Test Chamber with illumination provides complete stability testing solutions for pharmaceuticals requiring light exposure studies.

With precise temperature control from 0°C to 65°C (illumination range: 15–50°C) and humidity control from 25% to 95% RH ±3% RH, this series supports accelerated, long-term, and photostability testing. The integrated illumination system with stepless dimming and built-in light intensity monitoring makes it ideal for modern pharmaceutical laboratories.

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** (7-inch for PSC-1500L-G) 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 (Note: PSC-80L model equipped with one independent fully-enclosed compressor)
- **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

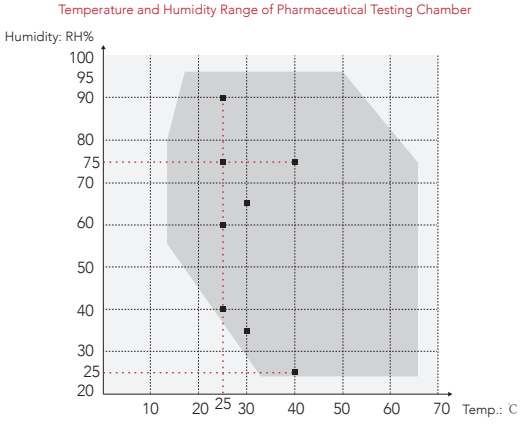
> Superior Chamber Design & Construction

- **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)

Temperature and Humidity Range of Pharmaceutical Testing Chamber



> 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.

> Specical Features for PSC-1500L-G

- 7-inch LCD Touchscreen Controller with graphical interface and curve display
- Standard USB Interface & Wired Monitoring and Alarm System

1000L / 1500L

Specification

Model	PSC-150L-G	PSC-250L-G	PSC-500L-G	PSC-800L-G	PSC-1000L-G	PSC-1500L-G
Temp. Control Range	0~65℃ (With illumination 15~50℃)					
Temp. Fluctuation/Uniformity	±0.5℃/±2℃	±0.5℃/±2℃	±0.5℃/±2℃~±3℃	±0.5℃/±2℃~±3℃	±0.5℃/±2℃~±3℃	±0.5℃/±2℃~±3℃
Humidity Range/Deviation	25~95%RH, ±3%RH					
Illumination Intensity/Error	0~6000LX Adjustable ≤±500LX (Stepless dimming)					
Timer Range	Each segment 1~99 hours					
Temp. & Humidity Control Method	Balanced temperature and humidity 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℃					
Power Supply	AC220V 50HZ	AC220V 50HZ	AC220V 50HZ	AC220V 50HZ	AC220V 50HZ	AC380V 50HZ
Operating Power (approx.)	~680 W	~750 W	~1400 W	~2880 W	~2960 W	~4800 W
Rated Power	2950 W	3200 W	3910 W	3600 W	3700 W	6000 W
Chamber Volume	150 L	250 L	500 L	800 L	1000 L	1500 L
Inner Dimensions (W×D×H, mm)	550×405×670	600×500×830	670×725×1020	730×750×1480	730×890×1480	1550×590×1650
External Dimensions (W×D×H, mm)	690×805×1530	740×890×1680	850×1100×1930	870×1085×2065	870×1220×2065	2110×890×2000
Standard Shelves/Trays	3 pcs	3 pcs	4 pcs	4 pcs	4 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					

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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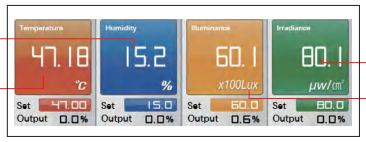
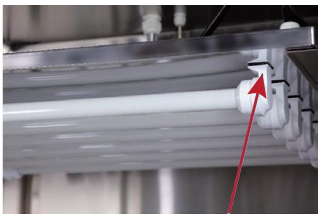
Appendix 1: UV Monitoring and Control (optional)

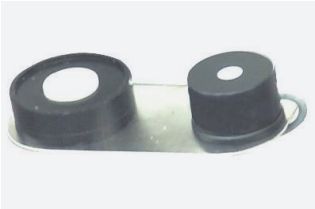
Programmable Touch Controller



Multi-channel Touchscreen Display



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.

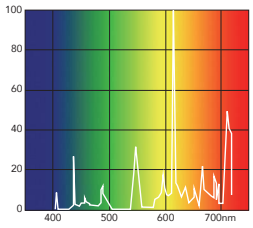
> Professional UV Lamps

- 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.

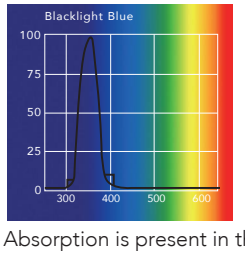
Key Specifications

> **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≥1.2×10⁶ 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)