LISUN GROUP

UV aging test Chamber

(UV-263LS)

Brochure

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Leader in Lighting & Electrical Test Instruments

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UV aging test Chamber is designed for evaluating the resistant performance of non-metallic materials, organic materials (plastics, paints, coatings, rubbers, etc.) under the specified conditions such as sunlight, temperature, and other climatic conditions. It creates a man-made testing environment imitating the natural light source such as sunlight and other damages in the nature, such as rain and dew damage, to impose on the materials and to assess the degree of color changing and fading under the accelerated environment conditions. The chamber fully complies with the requirements of Standard ISO 4892-1, ISO 4892-3, GB/T16585-1996, GB14522-93, GB/T16422.3-97, ASTMG53 and etc., provides the best UV sunlight simulation, and is easy to use and operate.

Main configuration:

- Working room: 1170×450×500mm (L*W*H)
- Outside dimension : 1300×550×1480mm (L*W*H)
- Material (internal & external): 304 SUS stainless steel
- Sample holder : Aluminum alloy frame plate
- Controller: Color touch-screen programmable controller
- Irradiation lamp : UVA-340 8pcs (4pcs on each side, total 2 sides)
- Protecting power supply from circuit overload, short circuit, over-temperature and water shortage by residual-current circuit breaker (RCCB)

Specifications:

- Temperature range : RT+40℃~70℃, Temperature uniformity : ±1℃
- Temperature fluctuation : ±0.5℃, Humidity range : ≥90%RH
- Distance between lamps : 70mm
- Distance between sample and lamp: 50±3mm
- Irradiance: 1.0W/m^2 adjustable
- Temperature, lighting, condensation, spraying and test cycle are adjustable
- Lamp : L=1200/40W (8pcs UVA life ≥2000hrs)
- Controller : color touch-screen programmable controller
- Way of temperature control : PID + SSR
- Standard size of testing sample : 75×290mm (Special size can be customized)\
- Sink depth : 25mm auto control
- Effective irradiation area : 900×210mm
- UV wavelength : UVA range is 315-400nm
- Testing time : 0~999H (adjustable)
- Temperature of irradiation blackboard : 50℃~70℃
- Standard sample holder : 24 inches
- The tester is equipped with automatic spraying function

System description:

- The test chamber has elegant appearance and manufactured with numerical control equipment and advanced technology.
- The material of test chamber is 1.2mm 304 SUS high quality stainless steel.
- The air channel of test chamber adopts single-cycle system, equipped with imported axial fan to improve the air flow, heating capacity and temperature uniformity.
- Lamp : Special UV lamp, toal 8pcs of two rows (40W/pc)
- Lamp life : above 2000hrs
- Water and consumption : tap water or distilled water (8L/day)
- Total 8pcs UVA lamps installed on both side of the working chamber.
- Tank-type heating: fast heating up, uniform temperature.
- Tank cover: Bi-direction flip type, easy to turn off.
- The tank automatically fills water to prevent damage to heating pipes without water.
- The sample holder made of stainless steel and or aluminum alloy.
- The bottom of the chamber adopts high quality fixed PU wheels.
- The drainage system use u-shaped plot sinks drainage.
- Sample surface parallels to the UV light plane.
- The sprinkler system installed with automatic sprinkler, pressure is adjustable.

Safety Protection Devices:

- Ground protection
- Power overload short-circuit breaker
- Circuit overload control、short-circuit fuse
- Water shortage protection
- Over temperature protection

Temperature control

- UV:

In the UV process, temperature can be set at any point between 50℃~70℃, depending on the light level and the indoor environmental temperature. Temperature of the device is adjusted by a controller with a microcomputer calculation functions to direct air heater, water heater and a series of other systems within the device.

- Humidity:

With the rising of temperature, the destructivity of moisture on material will increase rapidly. Therefore, temperature control is the basic requirement for the process of humidifying. In order to generate acceleration effect, it requires maintaining a high temperature in the humidified process. So, in the condensation process, temperature will be set at any point between 40 ℃ ~ 60 ℃.

Heating system:

- Adopting u-shaped titanium alloy high-speed electric heating pipe.
- Temperature control and lighting system are two completely independent systems.
- Output power of the temperature controlled by microcomputer.
- Heating system equipped with over-temperature protect function.
- Blackboard temperature is controlled and heated by color touch screen programmable scanner or digital buttons temperature controller. Power output is calculated by the microcomputer. PID is self-tuning and monitor is equipped with standard PT100 temperature sensor blackboard.
- Sink temperature is controlled and heated by Korean color touch screen programmable temperature controller. The sink locates in the lower part of the chamber, plus built-in electric heater. During the test, one of the sections is dark condensation process, which require the chamber inside is able to produce saturated steam with higher temperature. When the steam encountered relatively cold model surface, it will condense dew on the model surface.

Working conditions:

- Environmental temperature : 5℃ ~+32℃
- Environmental humidity : ≤85%
- Power : AC220 (±10%) V, 50HZ, two phase three wires
- Pre-installed capacity : 5kW