ACE TECHNOLOGY

Http://www.ace-climatic.com
TEL: 0086-29-85451431
XI'AN BRANCH: No.108, South Zhuque Street, Xi'an
NINGBO BRANCH: Century Square, South Liberation Road, Ningbo

Parallel UV Weathering Test Chamber

Technical Specifications

Http://www.ace-climatic.com
TEL: 0086-29-85451431
XI'AN BRANCH: No.108, South Zhuque Street, Xi'an
NINGBO BRANCH: Century Square, South Liberation Road, Ningbo

1.Product name and model

1.1Product Name	Parallel UV Weathering Test Chamber
1.2Model	UV340-P (Imported lamp from Q-lab, USA)

2.Product overview and scope of application

2.1 Overview	The damage caused by sunlight and moisture to materials causes tens of thousands of dollars in economic losses every year. The UV weathering test chamber can reproduce the damage caused by sunlight and dew. The test chamber exposes the material to be tested in a controlled interactive cycle of sunlight and moisture while increasing the temperature. The test chamber uses ultraviolet fluorescent lamps to simulate sunlight and simulates the effects of moisture through condensation.
2.2 Scope of application	It is suitable for testing various materials and inspecting the aging degree of related products and materials under changes in climatic conditions such as sunlight, temperature, humidity, condensation, etc.

3. Sample restrictions

This test equipment is prohibited from:

Testing and storing samples of flammable, explosive, and volatile substances

Testing and storing samples of corrosive substances

Testing or storing biological samples

Testing and storing samples of strong electromagnetic radiation sources

4. Basic parameters of the product

4.1Working room	500×1140×600 （D×W×H）mm
4.2External dimension	750×1400×1750 （D×W×H）mm
4.3Test environment conditions	Ambient temperature is 5～35℃, relative humidity ≤85%RH,
4.4Temperature range	RT+10℃～70℃
4.5Temperature Fluctuation	±1.0℃
4.6Temperature uniformity	±2.0℃
4.7Humidity range	Condensation period≥85%RH; Irradiation period ≤75%RH
4.8 Condensation temperature	40℃～60℃
4.9Parallel center distance of lamp tubes	70mm

4.10Distance between the test sample and the lamp surface	50~400mm adjustable (supporting samples up to 350mm)
4.11Light Source	UVA-340+ Optional: UVB-313
4.12UV Lamp Wavelength Range	290～400nm
4.13UV irradiance	0.4~0.9W/m²adjustable (UVA) 0.35~0.8W/m²adjustable (UVB)
4.14Sample rack dimensions	500×1100mm
4.15Effective irradiation surface	550*950mm
4.16Spray	4 atomizing spray nozzles on the top
4.17Power supply voltage	220V 60Hz

5.Compliance with standards

Implementation standards: GB/T16422.3 GB/T16585 GB/T14522 Artificial climate accelerated test methods for plastics, coatings and rubber materials for mechanical industrial products, ASTM G154, ASTM D5208 and ASTM D4329, ISO4892-3 ISO61345 GB/T30984.1 Photovoltaic PV test, test method for plastic exposure to indoor light sources (part of the parameter indicators of the above standards)
ISO 4892-1 “Plastics Methods of exposure to laboratory light sources Part 1: General guidance”
ISO 4892-3 “Plastics Methods of exposure to laboratory light sources Part 3: Fluorescent UV lamps”
ASTMG53 “Standard Practice for Operating Light-and Water-Exposure Apparatus (Fluorescent UV-Condensation Type) for Exposure of Nonmetallic Materials.”
GB/T 16585-1996 “Rubber,vulcanized–Test method of resistance to artificial weathering (Fluorescent UV lamp)”
GB/T 16422.3-1997 “Plastics-Methods of exposure to labory light sources- Part3:Fluorescent UV lamps”

6.Structural characteristics

6.1Chamber structure	The chamber adopts an integrated structure, which is divided into three parts: upper, middle and lower. The upper part is the control panel, the middle is the test work area, and the lower part is the electrical and mechanical room. The inner tank is made of 1.2mm SUS304 stainless steel plate, and the outer shell is made of 1.2mm thick A3 steel plate sprayed with plastic. The bottom of the equipment is equipped with a humidification system and a water storage tank, and is equipped with a water heating and air heating system. The circulation system consists of a fan and an air duct to increase the air flow and greatly improve the temperature uniformity of the test chamber
6.2Reference pictures	

(pictures are for reference only)	 
6.3Lamp	Original imported U.S. QUV UV lamps (Q-lab), 8 evenly spaced in a row on the top of the chamber, 40W/lamp Lamp life: 1600h
6.4Water sources and consumption	Purified or distilled water 8 liters/day
6.5Test water reuse	The overflow and reuse of test humidification and spraying water is returned to the lower water tank of the test chamber by installing a water purification filter, and can be reused to save water.(A water purification filter needs to be installed at the water inlet.)  
6.6 Controller	Adopt Taiwan 7-inch touch screen "TH7140" touch screen controller, the setting method is touch input, with set value, measurement value,

	ultraviolet irradiance display, PID self-tuning Operation mode: fixed value operation Temperature display, setting accuracy: ±0.1℃ Temperature display resolution: ±0.1℃
6.7Input method	PT100 platinum resistance, blackboard thermometer, UV279~420nm ultraviolet irradiance sensor
6.8Execution components	French "Schneider" AC contactors, thermal relays, leakage circuit breakers; Taiwan "WST" solid-state relays; French "Schneider" intermediate relays, etc.

7.Sample rack setting

Standard flat surface

8.Safety protection device

8.1Test chamber	Adjustable over-temperature protection
8.2Others	Main power phase sequence and phase loss protection Leakage protection Load short circuit protection

9.Conditions of use The user shall ensure the following conditions

9.1Site	The ground is flat, well ventilated, and free of flammable, explosive, or corrosive gases and dust. There should be adequate maintenance space and drainage drains around the equipment.
9.2Environmental conditions	Temperature: 5℃～35℃ Relative humidity: ≤ 85%RH
9.3Power Supply	AC220V 3.0KW

10.Delivery time

10.1Delivery period	30days
10.2Quotation validity period	60 days