

UV/WT-SI - 3260

UV Weathering Test Chamber



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

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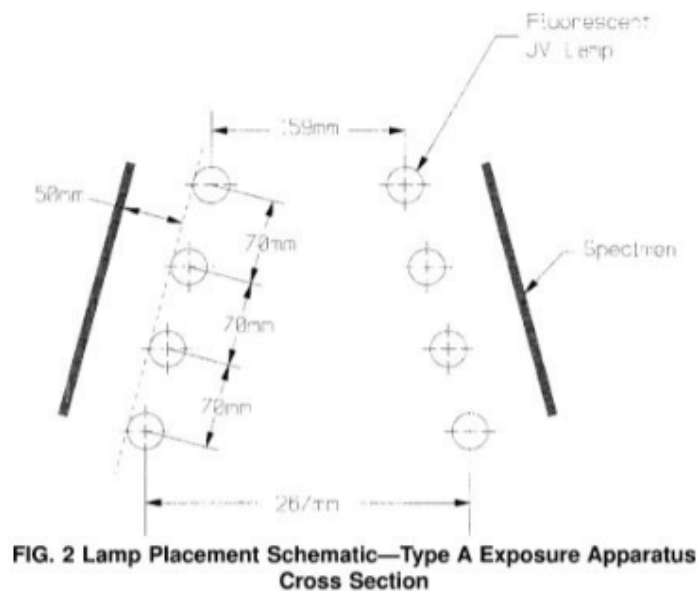
►► Test Standards

- Our UV/WT -SI-3260 chamber can perform the test procedure according to ASTM G 53, ASTM G154, ISO16474-3, ASTM D 4329, ASTM D 5208, ISO 4892 international standards.

Apparatus

6.1 Test Chamber, The apparatus employed constructed of corrosion-resistant materials enclosing eight fluorescent UV lamps, a heated water pan, test specimen racks, and provisions for controlling and indicating operating times and temperatures and shall conform to either Type A or Type B apparatus, (e) the irradiance level.

Type A An exposure apparatus where the lamps shall be mounted in two banks of four lamps each as shown in Fig. 2. The lamps in each bank shall be mounted parallel in a flat plane on 70 mm centers.



6.1.1.1 The test specimens shall be mounted in stationary racks with the plane of the lamps surface parallel to the plane of the lamps at a distance of 50 mm from the nearest surface of the lamps, as shown in Fig. 2.

6.1.2 Type B⁷: An exposure apparatus, as shown in Fig. 3, which is equipped with a radiometer and readout device capable of measuring and controlling the amount of radiant exposure received by the test specimens.

6.1.2.1 The lamps shall be mounted in two banks, of four lamps each as shown in Fig. 3.

6.1.2.2 The distance between the test specimen and the light source varies, depending upon where in the sample mounting area the specimen is placed. 6.2 Lamps, shall be medium bipin fluorescent V lamps with a length of 1220 mm, and a nominal rating of 40 W when operated from a ballast providing a controlled current of 430 mA at 102V.

6.2.1 unless otherwise specified, the lamps shall be UV-8 lamps with a peak emission at 313 nm and a spectral energy distribution as shown in Fig. 1.

6.2.2 Other fluorescent UV lamps meeting the size and electrical characteristics in 6.2 may be used, provided that the lamp and spectral energy distribution are reported in conformation with section 11. Differences in lamp energy or spectrum can cause significant differences in test results. Some applications (for example, behind glass) may require alternate lamp type. see Appendix XI n Lamp Applications for further information on lamp selection.

6.3 Lamp spacing and Arrangement-The lamps shall be mounted in two banks of four lamps each as shown in Fig. 2. The lamps in each bank shall h mounted parallel in u flat plane on 70-mm centers.

6.4 Specimen Mounting and Arrangement-The test specimens shall be mounted in stationary racks with the plane of the test surface parallel 10 the plane f the lamps at a distance of 50 from the nearest surface f the lamps, as shown in rig. 2.

6.4.1 The test specimens shall b exposed within an area 210 mm in height by 900 mm wide on each side of the

6.5 ondensation Mec/1wris111-Water vapor sh:111 be generated by heating a water pan extending under the entire sample area and containing u minimum water depth of 25 mm.

Specimen racks and the test specimens them .elves ihall constitute the side walls or the chamber. The buck side of the specimens shall be exposed to cooling effects of ambient room air. The resulting heat transfer causes water to condense on the test surface,

6.5.1 The specimens shall be arranged so Lhal condensate runs off the Lest surface by gravity and is replaced by fresh condensate in a continuous process. Vents along the bouom of the test chamber shall be provided to permit an exchange or ambient air and water vapor to prevent oxygen depletion of the condensate.

6.6 Water Supply, with an automatic control to regulate the level in the water pan shall be provided. Distilled, deionized, or potable tap water are equally acceptable for purposes of the rest, since the condensation process itself distills water onto the test surface,

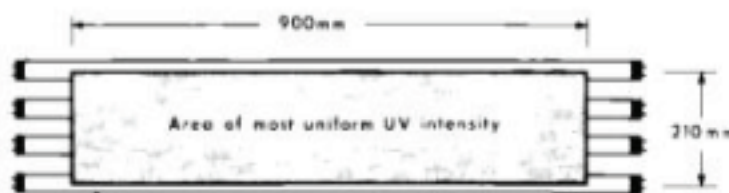


FIG. 4 Limits of Area of Uniform Intensity

6.7 Cycle Timer, a continuously operating cycle time. for programming the selected cycle of UV periods and condensarion periods.

6.7.1 Hour meters sh.all be provided to record total time of operation and total rime of UV eposure,

6.8 Specimen Temperature Measurement:

6.8.1 Specimen rempernture shall be measured by a ther mometer with a remote sen. or attached to a black aluminum panel 75 by 100 by 2.5 mm thick. The thermometer shall be pre-cise to $\pm 1^{\circ}\text{C}$ through a range from 30° to 80°C . The indicator dial shall be located outside the test chamber.

6.8.2 The black aluminum panel with the thermometer sensor shall be po itioned in the center of the exposure area so that the sensor is subject 10 the same conditions as the specimen .

6.9 Specimen 11 Temperature Control:

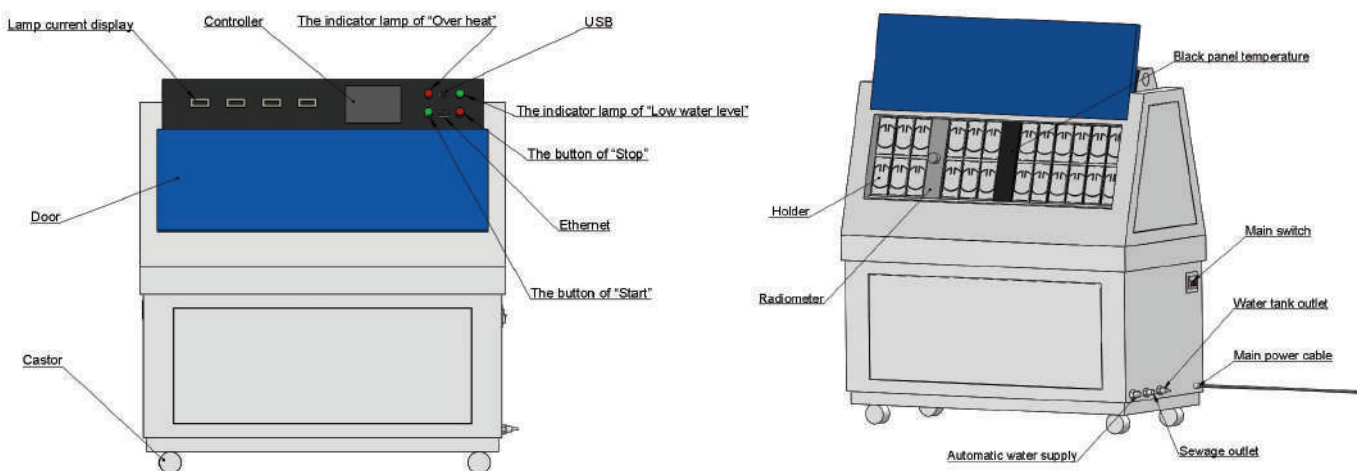
6.9.1 During UV exposure, the selected equilibrium tern perature shall be maintained within $\pm 3^{\circ}\text{C}$ by supplying healed air to the Lest chamber.

6.9.2 During condensation exposure, the selected equilibrium temp rature shall be maintained within $\pm 3^{\circ}\text{C}$ by heating the water in the water pan.

6.9.3 The UV and condensation temperature controls shall be i ndependent of each other.

6.9.4 Door shall be located on the room air , side of the specimen rack. to net as insulation during the UV exposure and 10 minimize drafts. such doors shall not interfere with the room air cooling of the pecimen during rhe condensation exposure.

►► Diagram





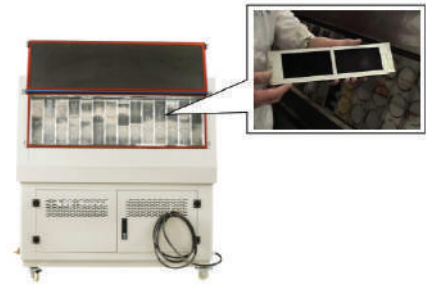
►► Technical Parameter

Model		UV/WT-SI-3260	
Internal Dimension (mm)		450*1170*500	
Overall Dimension (mm)		680*1300*1500	
Specimen Holder Size(mm)		100mm * 150mm	
Specimen Capacity		54 Pieces	
Irradiation Source		Fluorescent UVA 340 lamp - 8 pcs (Option: UVB313 lamp)	
Parameter	Temperature Range	Ambient ~ 90 °C ±2°C	
	Black Panel Temperature (BPT)	35 ~ 80 °C	
	Humidity Range	≥95% RH	
	Bandwidth	340 nm	
	Irradiance Control	0.3~20 W/m ² , adjustable	
	Water Spray Cycle	1~9999H59M (Adjustable)	
	Distance of Specimen and lamp	50mm	
Constructure	Heating Element	Nichrome heater	
	Controller	Programmable color LCD touch screen controller	
		Ethernet connection, PC Link, USB	
	Water Supply System	Automatic water supply	
		Water purification system	
	Build-in Water Tank(mm)	350*350*300	
Material	Safety Device	Over-temperature Protection; Over-current Protection; Water Shortage Protection; Earth leakage Protection; Phase Sequence Protection	
	Exterior Material	Steel Plate with protective coating	
	Interior Material	SUS304 stainless steel	
	Thermal Insulation	Polyurethane foam and insulation cotton	
Power Supply		220V 50Hz/60Hz	
Standard		ISO 16474-3, ISO4892-1,ISO4892-3, ASTM G154, ASTM D4329, ASTM D458, ASTM C125, ASTM C1442, ASTM C1519, ASTM C793, ASTM D1148, ASTM D3424, ASTM D3451, ASTM D410, ASTM D481, ASTM D657, ASTM D6662, ASTM D750, ASTM D904, GM 9125P, ISO 29664	
Maximum Noise		65 dBA	

►► Construction

1) Sample Shelf

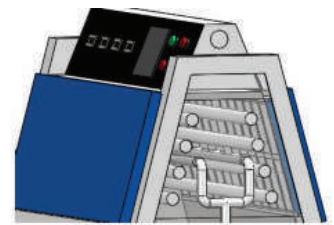
- Flat specimen holders, aluminum panels with rings.
- Each specimen size is 100mm * 150mm, can hold 56 pieces.
- Special sample holder can be customized



2) UV Lamp

- The chamber is equipped with total of 8 lamps, each 40W.
- 8 pc of UVA 340 fluorescent UV lamps.
- When use, users just need choose the one of them, and it will auto switching and running.
- Service time of lamp: 1200 hours.
- Brand: QUV
- Easy to change lamps.

UV Lamp

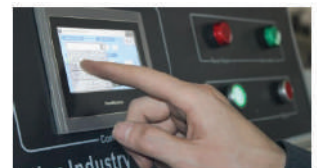


3) Controller

- PID programmable color touch screen controller, network connection computer.
- Can edit 120 programs 100 segment.
- LIB also can preset program into the controller based on user testing requirements.
- The set system language is English for standard.
- The voltage of each lamp will be displayed on the controller to facilitate troubleshooting;
- The controller displays the total use time of each lamp tube, which is convenient for replacing the lamp tube later.

4) Castor

- Install 4 castors for ease moving, and with brakes function.



5) Water Re-circulation

- Water purifier: mainly purification from water source to water tank.
- Water re-circulation system that reduced water use and a series of water pipes.



7) External Material

- A3 steel plate with galvanized coating;
- Electrostatic treatment; High and low temperature corrosion resistance. High hardness, anti - impact.
- Very high safety factor;
- Color can be customized.



【Core Function】



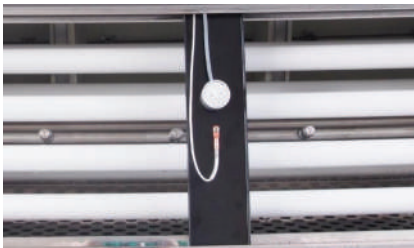
Water Spraying

The water spray pipe is equipped with ten nozzles, the diameter of the nozzle is 0.5mm, the settlement is 0.8 ~ 1.0mm / 80cm² / H, and the flow rate is 0.3L / min, which simulates outdoor moisture damage to the material.



Controller System

The PID controller as the main control unit to command, operate, detect and redistribute the various components of the equipment to achieve maximum effective use. Screen display function: LCD display, which can display test conditions including temperature, water spraying, black panel temperature and irradiance and time.



Black Panel Thermometer

The blackboard thermometer is composed of a stainless steel flat plate with a length of 150 mm, a width of 70 mm, and a thickness of 1 mm. The side of the board facing the light source should be coated with a black flat lacquer to absorb at least 90% of the total incidence. The temperature measurement of the blackboard is made by a platinum resistance sensor located in the center of the plate.



Radiometer

UV Irradiance Radiometer is available for UV test chamber. The radiometer is a photoelectric sensor with fast response, reliable performance and high accuracy.

* Only UV/WT-SI-3260 have radiometer.

▶▶ Accessory

- 1). Wet wick for humidity sensor - 1 pc;
- 2). PT-100 temperature sensor - 1 pc ;
- 3). High and low water level float - 2 pcs;

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