

# UV Tester



Equipment Part Number	KD-UV01-1114	KD-UV02-1114	KD-UV01-2226
<b>Specification</b>			
Solar Panel dimension (m)	1.1 x 1.4 x 1 pc	1.1 x 1.4 x 2 pcs	2.6x 2.2x 1 pc
Internal Dimension W x D x H (m)	1.2 x 1.3 x 1.8	1.2 x 2.4 x 1.8	2.4 x 2.8 x 2.6
External Dimension W x D x H (m)	1.4 x 2.3 x 2.1	1.4 x 3.4 x 2.1	2.4 x 3.8 x 2.9
Effective Irradiance area W x H (m)	1.2 x 1.7 (W x D)	2.4 x 1.7 (D x H)	2.6 x 2.2 x 1 pc

Technical Specification	
Irradiance Intensity	Adjustable, we warranty average uniformity tolerance within $\pm 15$
temperature resolution	0.1°C
Irradiance temp range	RT + 5°C~80°C/Temp. tolerance $\pm 5^\circ\text{C}$
Method of Temp control	PID SSR Temp Control
Recommended Environmental	5 to 35°C, low humidity, minimum distance from the wall is 300 mm

## Main feature

With the UVA-340(UVB-313) 100W as the light source, the UV Tester is simulating the sun to generate the UV light, for material endurance testing. From the temperature close loop control, it is able to make adjustment to the irradiance level for stability. At the same time, time interval is controlled.

## Component Overview

### 1.Light Source :

The center point of the light is 70mm ( for each group ) , to ensure uniformity UV light is 1700mm in height, located at both sides or one side as per design specification.

We also can provide one side is able to place the solar module of up to 2 piece of 1.0 x 2.0 m each. (For Special requirement, we can build a chamber of the size to support 2 or 4 large PV Panels of 1.2 x 2.2m, the light will be at the side of both chamber wall and the PV will be placed at the center of the chamber back to back facing the UV lights.

The power of the light source is 100W (imported UVA and UVB UV lamp) The UV lamps are installed at the one or both sides of the instrument. The UVA/UVB lamps spectrum mainly around the range of 340nm and 313nm; Spreading around 280~400nm.

The current to the lamp is controlled, thereby able to make adjustment of the intensity of the light source with the uniformity range of  $\pm 15\%$  as per IEC 61215/61646 Standard.

With the Pyrometers and Current controlled Lamp system, the intensity of the light can be adjusted from the level of current flow.

Lamp life duration is about 1200 hours.

### 2.Electrical Control :

#### A. PC with PID Temperature control.

Specimen surface irradiance uniformity :  $\pm 15\%$ .

Temperature control : PT-100 Temp Sensor , it is precision controlling method for front and rear sides of the Solar module.

Temperature control :  $60C \pm 5.0C$ .

#### B. Timing Interval: 0~9999hrs , accumulative time and power off information recording.

### C. Safety

**Protective Door :** Power will be cut off when the door is opened , and the temperature will be in the cooling stage automatically.

Safety door conform to IEC047-5-1 Standard.

**Chamber temperature protection :** When the chamber temperature exceeding 85°C , The temperature control system will cut off the power supply to the lamp and heating device and proceed to the cooling stage automatically.

### 3. Specimen cart :

Electrically controlled for distance adjustment.  
Including Automatic X -Y Data Acquisition Measurement.

### 4. Chamber Material :

SUS304# Stainless Steel with stainless coating.

### 5. Operation Environment :

Power : 380V±5% , 3 phase , 50/60HZ , 30A.

Climate : 5~35C, Low humidity, minimum distance from the wall is 300mm , Well ventilation, water cooling system.



### Advantages:

- + The report from CBTL (Taiwan), conform to IEC 6162, IEC 61646 is provided
- + King Design is one of the few approved supplier listen on IECEE, please see <http://www.iecee.org/ctl/equipment-suppliers.html>
- + This system is installed in many organisations, especially in the National Level Test Lab.
- + Fully automatic X Y Data Acquisition System
- + Fluorescence tube UV lamps, low power consumption and free from ozone radiation.
- + Fluorescence Tube is lower cost than metallic Tube