



**YUYANG INDUSTRIAL CO., LIMITED**

China Manufacturer of Fire Testing Equipment

## **Burning / Flammability Testing Equipment UL 1730 ASTM E108 For Solar Cell Spread**



- **Product Details:**

- Place of Origin: **Chian**
- Brand Name: **YUYANG**
- Certification: **CE ISO UL**
- Model Number:

- **Payment & Shipping Terms:**

- Minimum Order Quantity: **1 set**
- Price: **Negotiation**
- Packaging Details: **Plywood Box**
- Delivery Time: **10-15 work days**
- Payment Terms: **T/T L/C Western Union**
- Supply Ability: **5 sets per month**
- Share to :

## **UL 1730 ASTM E108 Solar Cell Spread of Flame & Burning Brand Testing Equipment**

### **Product introduction:**

Solar Cell Spread of Flame & Burning Brand Test Machine is based on UL 1730, IEC 61730-2 design and development. Is to simulate real conditions to assess roof and components of fire-resistant performance of the instrument, in A1.82m, b 2.4m and c 3.9m specimens to evaluate A~C level. Also can be used in fire-retardant performance of photovoltaic components used in this test.

### **Standards:**

UL 1730: multi-family and hotel room individual dwelling unit smoke detection monitors: electric signal detection of house dust;

UL 790: standard method of fire test for roof covering materials;

ASTM E108-04: standard method of fire test for roof covering materials;

NFPA 256: fire test of roof deck.

IEC 61730-2 Appendix b: fire tests on PV modules.

### **Equipment characteristic:**

#### **Structural parts**

1, Plywood roof covering materials, dimensions: 1,300 (w) X1,000 (d) x120 (h), to install the test sample;

2, Non-combustibility test Board, installed at the end of testing, can stop the test panels tempered;

3, Stainless steel fan control board, the test angle can be adjusted, size: 1,440 (l) x 940 (h) mm;

4, Used to support the testing of the main frame bracket, corrosion-resistant steel, dimensions: 1,020 (l) x 1,000 (d) x 1,473 (h) mm;

5, Non-combustible plate Assembly, installed in front of the frame to simulate the eaves and cornice, extension of the flame from the burner to the specimen, dimensions: 330 (w) x 2,130 (d) x 584 (h) mm;

6, Air flow rate for the test panel:  $19 \pm 8$  km/h (5.5M/sec), and configure the anemometer monitor;

- 7, Separate ventilation pipes, can be extracted from outside the laboratory air;
- 8, Honeycomb filter is installed in the air duct, installed gas inlet guide vane;
- 9, Ventilation ducts equipped with slope adjustment panel for adjusting the air flow direction;
- 10, Ventilation pipes attached to the Guide, can enhance speed to ensure supply test airflow from the outside interference, guide plates made of stainless steel, location does not change with the wind pressure;
- 11, Duct materials for stainless steel, corrosion-resistant and heat-resistant, size: 2,130 (w) x 762 (h) x 3,000 (l) mm;
- 12, Fan 220V,50HZ, three-phase power, is equipped with a reverse system can automatically adjust wind speed, minimum flow for 300m<sup>3</sup>/min;
- 13, Infinitely variable speed inverter, 0-100% adjustable;
- 14, Gas burners (for intermittent Shi Huo, flame spread and flying fire), 1.12m, 60.3mm, moving in the test side has a 12.7mm (w) \*0.91m (long) slit;
- 15, Gas burner can provide a 22,000Btu/min (387kWh), and according to a, b, c three combustion levels, high-precision gas control valve controlling gas flow,
- 16, Top burner thermocouple is installed 58.7mm, 888 ± can test 28 °C;
- 17, Automatic ignition system, ensure the security of test performance, ignition electrode 1.8kVp mass flow controller is the minimum pressure according to different standards, control gas flow rates, Class A and B:21,000 ~ 22,000 Btu/min (369 ~ 387 kWh) for 10 minutes, Class C:18,000 ~ 19,000 Btu/min (316 ~ 334 kWh) 4 minutes;
- 18, Temperature control system-Class A and B:760±28°C (1400±50°F)-21,000 ~ 22,000 Btu/min-Class C:704±28 c (1300±50°F)-18,000 ~ 19,000 Btu/min
- 19, High precision pressure gauges and pressure regulating valve controls the gas pressure;
- 1)-Each transfer to gas in the burners need to follow a different test and control methods;
- 2)-LNG: using MFM can accurately measure flow (flow control valve control);
- 3)-LPG: air flow rate using the inverter system: the test deck at 19 ± 8 km/h (5.5M/sec);
- 20, Metallic mesh support materials, pallets can be rotated, so that full combustion of materials;

### **Test section**

- 1, Computer control system of United States special control software for Labview experiment, integration 10.2 "LCD scree";
- 2, Data acquisition systems, LabView programming language is used to program, data acquisition cards United States NI offers

3, Data acquisition system consists of the following parts:

- 1) 16-bit thermocouple input module
- 2) 16 bit a/d conversion input module
- 3) Data input/output module
- 4) 12 bit a/d conversion output module
- 5) 4 and 8-slot backplane
- 6) Labview modules
- 7) Labview/Ethernet network module

4, Brand testing systems, gas burners, the flame engulfed the burning material, the gas burner is  $880\pm 10^{\circ}\text{C}$  temperature can be adjusted;

### **The standard results**

1, General standards for flame spread

1) Any part of the roof covering materials (component or Panel) from the test deck in flame or glowing particles blown,

2) Can slide through, split, curved roof covering materials, such as roof deck open,

3) Fire safety rating A: flame spread range is 1.82M,

Fire safety level B: flame spread range is 2.4M,

Rank C fire safety: fire spreading area is 3.9M,

Measured from the edge of the sample spread of flame,

2, General standards for roof combustion,

1) Any part or component of the Panel from the test deck in flames blowing or falling,

2) Parts of the roof deck or a part of a Panel in the roof structure or component in the form of luminous particles disappear,

3) Continue with components or panels of combustion,

### **Equipment specification:**

Model	YY137
Dimensions	About 6,000 (w) X2,200 (d) X2,000 (h) mm
Power supply	AC 380V 3-Phase, 50/60Hz, 50A
Weight	Approx. 850kg
Brochure	Can provide
Exhaust	Minimum 400 m <sup>2</sup> /min
Tools	Propane gas/liquefied natural gas, Compressed air, Vacuum cleaners, Computer

