



CLIMATIC SOLAR PANEL CHAMBERS

HARNESS THE POWER OF THE SUN



International Solar & PV Environmental Testing Systems

The following standards apply to the testing of photovoltaic modules:

IEC 61215

Terrestrial crystalline silicon photovoltaic (PV) modules, type suitability and type approval

IEC 61646

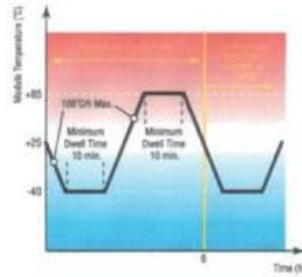
Terrestrial thin-film photovoltaic (PV) modules, type suitability and type approval

ASTM E 1171

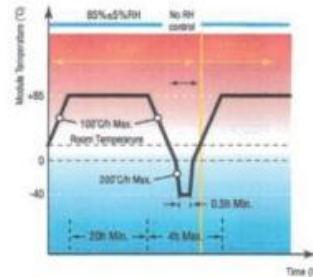
Standard Test Method for Photovoltaic Modules in Cyclic Temperature and Humidity Environments.

These standards comprise different processes for testing of the suitability of the design; however, they have identical temperature and humidity testing procedures.

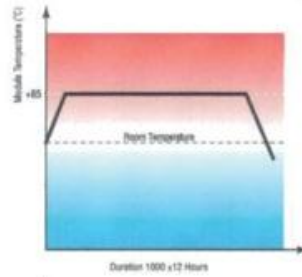
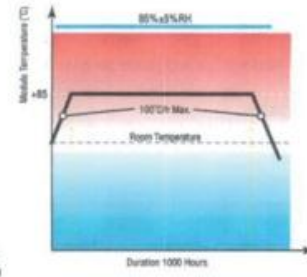
Temperature Shock Cycling Test (10.11)



Humidity Freezing Test (10.12)



Damp Heat Test (10.13)



Temperature Test (IEC 60068-2-2)

To evaluate the ability of the module for use/storage under high temperature

Light testing with UV irradiation and solar simulation is also described in these standards.

Solar Simulation on PV Modules

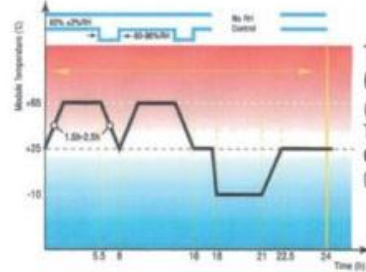
- Determination of the maximum output
- Determination of the temperature coefficients
- Measurement of the nominal operating cell temperature
- Performance under standard testing conditions
- Performance at nominal operating cell temperature
- Hot spot endurance test
- UV Test - Pre-treatment of the PV module with ultraviolet (UV) radiation before the thermal shock load and the humidity freezing testing.

Required source of radiation:

- UV radiation source within the range of 280 to 385 nm and at max. 250 W/m²
- Light Treatment (only under IEC 61646)

Required source of radiation:

- Solar simulator with 800 to 1000 W/m²



Temperature and Humidity Cyclic Test (IEC 60068-2-38)

Testing procedure of power conditioner for small PV power generating systems



Standard Features

1. Water Cooled refrigeration system.
2. Programmable TFT 5.7" touch screen colour controller.
3. Networking Software and RS232/ RS485 connections, up to 16 chambers.
4. 50mm access points on left and right side of chamber.
5. Large Viewing Window (300mm x 400mm)
6. Caviet Operation.
7. Castor Wheels.
8. 2 Stainless Steel Shelvings.
9. Cartridge type water reservoir with connector.
10. Capacitive measuring humidity sensor.



Standard Safety Features

1. Leverage breaker.
2. Circuit breaker.
3. Overheating protection from high temperature and humidity.
4. High and low refrigeration pressure switch.
5. Built-in compressor protection.
6. Low water level switch.
7. Current sensing switch for air circulator.
8. Current sensing switch for compressor.
9. Pressure relief port.
10. Emergency shut-off switch.



Options

1. Chart Recorder (2, 6, 10 or 12 channels); paper or paperless.
2. Door lock system with door switch.
3. Additional port holes (50mm, 80mm or 100mm).
4. Inner rack for Solar Panels.
5. Customisation of sizes and specs are **most welcome**.



Model No.	WTH	3547C	4100C
Test Space Volume	Litres	3500	4100
Test Space Width	mm	1300	
Test Space Depth	mm	2006	2320
Test Space Height	mm	1360	
Exterior Width	mm	1600	
Exterior Depth	mm	3356	3670
Exterior Height	mm	1825*	
Maximum Temperature	Deg. C	120	
Minimum Temperature	Deg. C	-50	
Temp. Heat Up Rate (App)		3.5 Deg. C/min	
Temp. Cool Down Rate (App)		2.5 Deg. C/min	
Temp. Consistency (Time)		Equi. 0.5 Deg. C	
Temp. Uniformity (Space)		Equi. 1.5 Deg. C	
Calibration Valves		Customer to Specify	
Humidity Range		10 to 98% rH	
Humidity Consistency (Time)		Equi. 1.5% rH	
Humidity Consistency (Space)		Equi. 3% rH	
Electrical Connections		415, 3 Phase 50 Hz	
Cooling Condenser		Water Cooled	

* For WTH Solar Chambers, additional (a) console of dimensions required

(a) Width: 400mm
Depth: 1500mm
Height: 1800mm

Condensing Unit Dimensions
Width: 1700mm
Depth: 1000mm
Height: 1750mm

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