

The right weathering testing instrument for photovoltaic modules

Atlas – Focused On Your Goals

Atlas has been pioneering weathering testing for over 85 years. From our industry-leading accelerated weathering equipment to our consulting services, our approach to the market is clear: Provide our customers with superior, easy-to-use technology and advanced testing solutions for a **quality product, a competitive edge, and a faster time to market.**

Atlas weathering testing instruments are the market leaders, setting and meeting compliance for a wide array of industry standards.

PV Module Sizes

Just as with material coupons and smaller components, full PV modules should be tested under appropriate conditions to reproduce the synergistic effects of the factors of weathering in end-use conditions. PV Modules currently range in size from smaller OPVs to larger modules that can be several square meters. Atlas offers a number of weathering testing instruments and systems to accommodate a range of module sizes.

Small Chambers:	Up to 60 cm x 30 cm
Medium Chambers:	Up to 170 cm x 80 cm
Large Chambers (Custom-built):	Up to 190 cm x 140 cm
Ultra Large Chamber Installations:	No size limit

XR360 PV Module Weather Durability Testing System

The XR360 integrates advancements in environmental chamber and xenon solar simulation technology.

The XR360 comes in three models, each with the capacity to test over 90% of current PV modules. The large chamber is equipped with four water-cooled, high performance long-arc xenon lamps and full climatic functionality.

The concept of a custom-built unit allows for specific and tailored design.



ULTRA-LARGE MODULES

Solar Simulator

Ultra-large systems with unlimited capacity are outfitted with customized metal halide luminaries incorporated into walk-in size and larger, climate chamber installations. These installations provide a uniform distribution of solar analog light over large areas.



- No size limit

MEDIUM MODULES

SolarClimatic (SC) 2000

The SolarClimatic 2000 utilizes full spectrum metal halide light sources with high irradiance capability that meets CIE 85 daylight simulation requirements.

- Medium modules up to 170 cm x 80 cm
- Irradiance, temperature and relative humidity control
- Specimen spray
- Full climatic functionality



LARGE MODULES

XR360

The XR360 incorporates the xenon arc technology offered in the venerable Atlas Ci Series instruments which meets CIE daylight simulation requirements.

- Large modules up to 190 cm x 140 cm
- Full climatic functionality



SMALL MODULES

SUNTEST XXL+

The SUNTEST XXL+ offers daylight according to CIE 85, ASTM, ISO and other full spectrum xenon technology standards. Perfect for smaller OPV modules.

- Small modules up to 60 cm x 30 cm or two mini-modules of up to 30 cm x 30 cm each
- Control of irradiance, temperature and relative humidity
- Specimen spray



	SMALL	MEDIUM	LARGE			ULTRA-LARGE
CHAMBER FEATURES	SUNTEST XXL+	SC 2000	XR360 GOLD STANDARD	XR360 SILVER STANDARD	XR360 BRONZE STANDARD	CUSTOM SOLAR SIMULATOR
Max Modules Size (cm)	60 x 30	170 x 80	190 x 140	190 x 140	190 x 140	Unlimited
Light Source	Xenon	Metal Halide	Xenon	Xenon	Xenon	Metal Halide
Max Irradiance	1-Sun	1-Sun	3-Sun+ (flexible)	3-Sun fixed	3-Sun fixed	3-Sun+
Irradiance (E) Control	Yes	Yes	Yes	Yes	Optional	Yes
Irradiance (E) Uniformity	±10%	±10%	±10%	±10%	±15%	±5%
Temperature (T) Range (°C) – Light On	30 to 70	-10 to 90	-5 to 100	40 to 100	40 to 100	-20 to 100
Temp Range (°C) – Light Off	25 to 70	-30 to 100	-40 to 90	Ambient to 90	Ambient to 90	Ambient to 90
Temp Uniformity	±10%	±10%	±10%	±10%	±15%	±10%
RH Control – Light On	40 - 80%	10 - 80%	60% at maximum E & T	60% at maximum E & T	60% at maximum E & T	10- 80%
RH Control – Light Off	to 95%	10 - 90%	10 - 95%	10- 95%	10 - 95%	10 - 95%
Freeze\Thaw	No	No	Yes	No	No	Option
Sample Spray	Yes	Option	Yes	Yes	Yes	Option
Height Adjustable Module Platform	No	No	Yes	Yes	Yes	Yes
Adjustable Array & Sample Angle	No	No	Yes	No	No	Yes

Notes: All instruments feature temperature and RH control. Irradiance and temperature uniformity shown for maximum module sizes.