

K3600

Electrical, Optical & Thermal
Imaging & Test Systems

Solar Cell Reliability Test System

Long-Term Reliability Test Under Various Irradiation & Thermal Conditions

This system provides combined environment of temperature & humidity control chamber with solar simulator, which enables long term test of solar cell with periodic measurement of efficiency under device aging at various environmental conditions.

Solar Simulator

I-V Parameter

LID

Long Term

MPPT

Temperature

Humidity



Long-Term Light Irradiation

High Speed I-V Test

Light Induced Degradation (LID)

Thermal Chamber with Solar Simulator

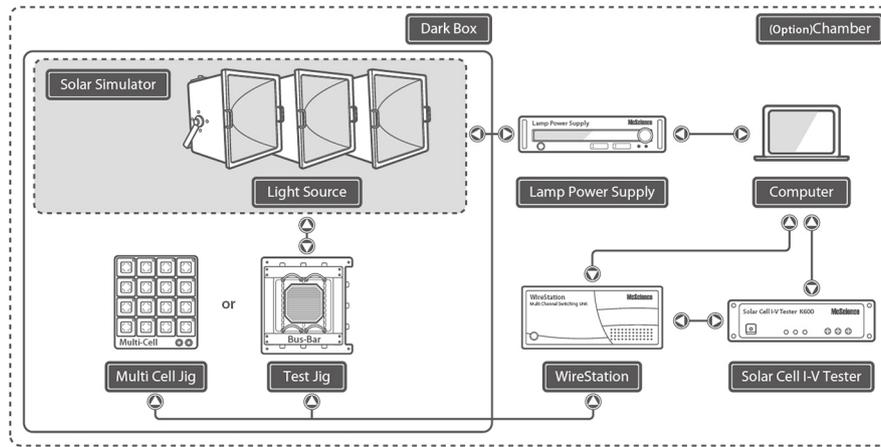
Maximum Power Point Tracking (MPPT)



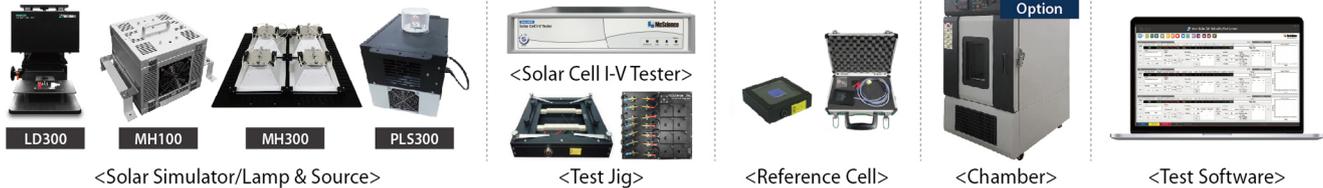
 **McScience**

Copyright© McScience Inc. All Right Reserved.

System Configuration



System Components



System Specification

Model Name	K3600 Solar Cell Reliability Test System
System Model	MH : Metal Halide Lamp / PLS : Plasma Lamp / LD : LED Lamp
System Option	Illumination Area Size No. 100, 300
System Configuration	Solar Simulator, Darkbox, Test Jig, SourceMeasure Unit, Reference Cell, Test Software, (Option) Temp Humidity Chamber
Illumination Area	100mm x 100mm ~ 300mm x 300mm
Illumination Light Spectrum	0.75 ~ 1.25% (AM 1.5G) (Using PLS)
Illumination Light Uniformity	<5% (Using PLS)
Illumination Light Stability	<0.5 % (STI), <2% (LTI) (Using LED)
Voltage Range / Accuracy	-20V ~ 20V / 0.1% Accuracy
Current Range / Accuracy	±100mA / 0.1% Accuracy
One Step Measurement Time	0.1 usec ~ 1 sec
Function	1 Sun Feedback
Measurement Data	Voltage, Current, Irradiance (Ref), LID, MPPT
Analysis Item	Isc, Voc, Imax, Vmax, Pmax, FF, Efficiency, Rs, Rsh, Time, MPPT, LID
Lamp Lifetime	PLS >10,000 hour, MH >2,000 hour, LD >10,000 hour