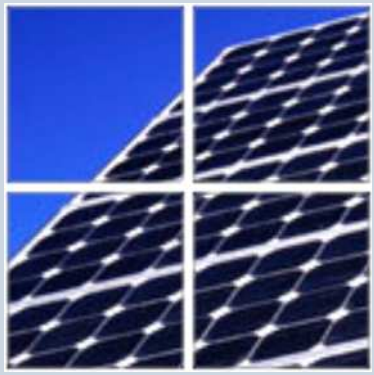
VS 6810

Portable I-V Curve Tracer



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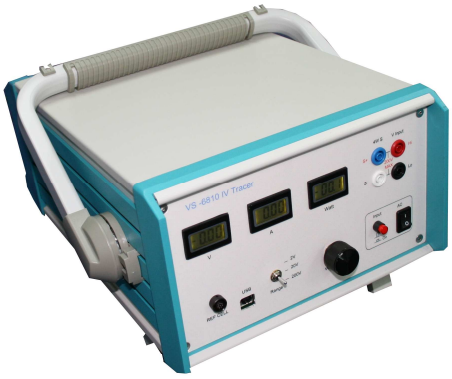
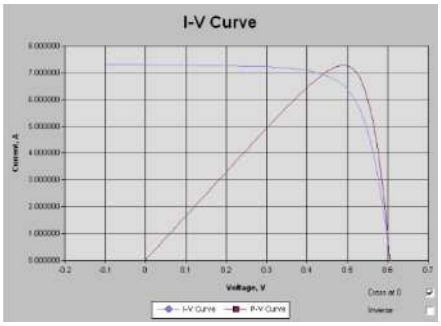


VS-6810 is a standalone instrument. User can take a reading directly from LCD panel meter for Short circuit Current Isc, Open circuit voltage Voc, Pmax, Vpm, Ipm. VS-6810 is suitable for Cell Module field measurement with power from 0 to 200W at manual operation mode.

VS-6810 can be controlled by notebook computer through USB 2.0 port. The computer software sweeps the voltage automatically and will generate an I-V curve in less than one second. Irradiance and temperature levels are recorded automatically.



The normalization/ Standardization software (option) is able to convert acquired test data to the value that should be in a Standard Reporting & Testing Condition (SRC / STC). The normalization data can be used to compare different PV modules among a group.

Key Features:

VS-6810 portable I-V Curve Tracer measures the I-V characteristics of Photovoltaic (PV) cells, module, and Array. It has a very wide Voltage range: 0V to 200V, resolution: 1mV, and current ranges from 0.1A to 10A; resolution: 0.01mA

Minus biasing voltage makes I-V curve cross over Y(I) axis at Zero Voltage. Isc is a real value.

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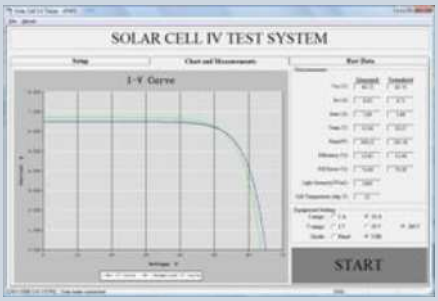

Electric Parameters:

- *Complete I-V, P-V curve*
- *Open circuit voltage, Voc*
- *Short Circuit Current, Isc*
- *Short-circuit current density, Jsc*
- *Peak Power, Pmax*
- *Maximum Power Voltage, Vmp*
- *Maximum Power Current, Imp*
- *Cell Efficiency, η*
- *Fill factory, FF*
- *Series Resistance, Rs*

Application:

- *Solar Module Field I-V Measurement*
- *Solar Module Field Pmax Monitoring*
- *Solar Cell Full Parameters Testing (c/w Class A solar simulator)*

Specification

Measuring method	Programmable Electronic Load, with minus biasing voltage
Input range	
Voltage	-1V -- 2V/20V/200V, Three ranges
Current	0 -- 10A/1A/0.1A, Three ranges
Input Type	
	V+, V- Vs+, Vs- , Four Wires method
	Reference Cell Input
	Pt100 Temperature Sensor Input

Manual Mode LCD Meter Display

Accuracy	Range	Accuracy	Resolution
	0 – 2 V	±1%	1mV
	0 - 20 V	±1%	10mV
	0 - 200 V	±1%	0.1V
	0 - 10 A	±1%	10mA
	0 – 200 W	±1%	0.1W

USB Mode PC Display

Accuracy	Range	Accuracy	Resolution
	-0.05 – 2 V	±0.2%	0.1mV
	-0.5 - 20 V	±0.2%	1mV
	-0.5 - 200 V	±0.2%	10mV
	0 – 10.A	±0.5%	1mA
	0 - 1.0A	±0.5%	0.1mA
	0 - 0.1A	±0.5%	0.01mA

Sweep Time	0.1 to 7 seconds adjustable
Protection	Over Current/Voltage Protection
	Over Temperature Protection
	- Thermostat controlled internal fan >50°C
	- Input cutoff when Internal temp >85 °C
Dimension	H157 x W 256 x D 400 (mm)
Weight	6 KG

Reference Standard

- ASTM E948-95(2005)
  Standard Test Method for Electrical Performance of Photovoltaic Cells Using Reference Cells Under Simulated Sunlight
- IEC 60904-1 2006
  Part 1: Measurement of photovoltaic current-voltage characteristics

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