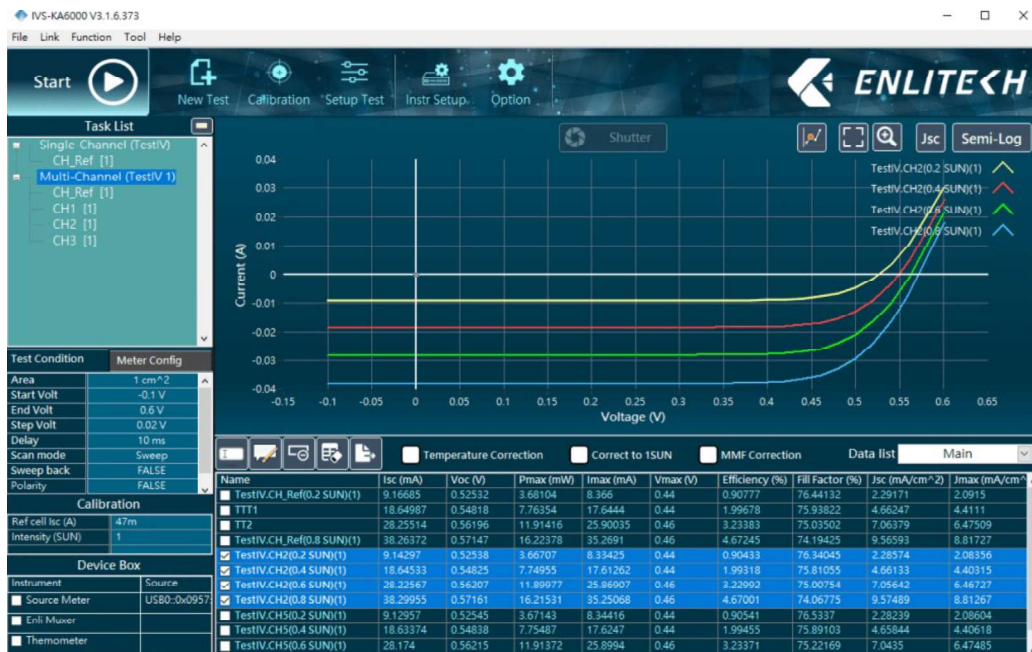


PV IV testing software: IVS-KA6000

Introduction

The Most Comprehensive IV Measuring and Analysis Software for Perovskite Solar Cells

IVS-KA6000 is a PV current-voltage (IV) testing software developed by Enlitech with over 10 years of experience. The last generation IVS-KA5000 had more than 1000 users in many laboratories around the world. IVS-KA6000 is redesigned and improved on the basis and user feedback. IVS-KA6000 can control a variety of SMUs and collect current and voltage data according to the parameters set by the user. The formulas and algorithms of the IVS-KA6000 are based on the foundation developed and published by NREL.



From the analyzing functions of IVS-KA6000, users can get the details of improving the conversion efficiency of the solar cells. Numerous laboratories adopted IVS-KA6000 consistently break the efficiency records and land on NREL's Efficiency Chart, such as ISCAS's 23.3% perovskite solar cells in 2019, UNIST's 24.8% perovskite solar cells in 2020, and ICCAS's 18% organic solar cells in 2020.

Application

- ◆ Measurements: Isc, Voc, Jsc, Jmax, Pmax, Vmax, Imax, η, FF, Rs, Rsh
- ◆ Forward scan/ Reverse scan/ Automatic forward and reverse scanning measurement
- ◆ Light soaking & MPPT measurement
- ◆ I-t, V-t, MPPT tracking function Single-sample multi-sub-cell automatic test
- ◆ Real-time correction function according to IEC
- ◆ NREL asymptotic measurement

Software Interface

Task project

- Show created task projects.

Test


- Show the test conditions of the

Calibration parameters

- Show the light intensity correction parameters.

Connections

- Show the connection status of instruments.
- Control connections.



Graph data

- Show the IV curve.
- Chart overlay display.
- Zoom in IV curve.
- Jsc/Semi-log display.

Data table

- Show the parameters of IV curves.
- IV correction function.
- Export data as text files.

Light soaking

- Light soaking status.
- Light soaking control.

Fig.1 IVS-KA6000 is the most comprehensive IV measuring and analysis software for perovskite solar cells.

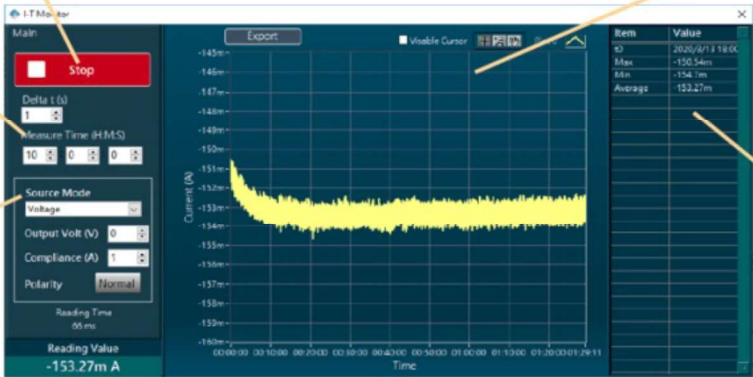
IVS-KA6000 software main functions.

Measurement time setting

- Press the button to control start or
- Press the button to control start or

SMU Setting

- Output source control.
- Set the output level and compliance.



Graph area

- Current/Voltage data chart.
- Export data as text files.

Statistics

- Starting time of measurement
- Max value
- Min value
- Average

I-t (current-time) monitoring function, which can monitor the device current or voltage variation with time.



Measurement | Setup | Eng

Start | Start V: 0.912 | End V: 1.368 | Step V: 0.04 | Area (cm²): 1

Output Volt (V): 1.368 | **Value (A): -0.000312773**

instability (%): 0.194656 | **Pass Elapsed T (s): 3.01** | **PASS**

Parameters: Voc (V): 1.73148, Isc (mA): 0.58179, Vm (V): 1.152, Im (mA): 0.431735, Pmax (mW): 0.497359, FF (%): 49.3727, Eff (%): 0.497359

NREL Asymptotic measurement for perovskite solar cells. IVS-KA6000 has a unique "asymptotic method" test function. The "asymptotic method" has become one of the standard methods for efficiency testing of new solar cells. IVS-KA6000 has a complete "asymptotic method" supporting scheme and automatic program control.



More Information ▶