



## SPECIALIST EQUIPMENT

Halocell Energy lab equipment enables you to develop research capability and master the fundamental processes involved with construction. The Laboratory Solutions allow you to quickly produce high quality, consistent test cells so that you can focus on researching optimum DSC materials and processes.

## PACKAGES

Halocell Energy Laboratory Solutions can be packaged to suit your needs, consider:

- Project Planning
- Equipment Commissioning

- Equipment Delivery and Installation
- Starter Materials Set
- Facility requirements identified
- Technical training on equipment
- Ongoing technical assistance allowance
- Package tailored to your individual needs

If you are planning to refurbish your laboratory, talk to Halocell Energy about the lab packages available. Consider Halocell Energy state-of-the-art machines, affordable prices, and technical know-how.

To view Halocell Energy range of lab equipment visit [www.halocell.energy](http://www.halocell.energy)

## HIGH TEMPERATURE PROGRAMMABLE HOT PLATE

fundamental instrument that cannot be missing in the best laboratories.



- Max temp 600°C
- 3 different programs
- 5 ramps
- compact design
- up to 230 mm X 160 mm substrate



## SCREEN PRINTER

The best quality/price ratio for a fast, reproducible and reliable printing



- Semi automatic
- up to 600 mm X 400 mm printing area
- compact design
- fast printing
- user friendly

## CO2 LASER SCRIBER

Low price high accuracy



- different size available
- compact design
- up to 80 W power
- up to 130 cm X 90 cm working area
- highest scanning precision
- high speed

## ULTRASONIC SOLDERING STATION

Best deal - high quality for a low price



- user friendly interface
- up to 500 °C
- small compact design
- portable
- ultrasonic oscillation output from 1 to 12 W

## LIGHT SOAKING CHAMBER MH

The essential instrument for long life testing



- 30 cm X 40 cm illumination chamber
- up to 20000 h life time
- compact design
- high value/ low cost
- W/h counter integrated

## YAG LASER

Best compromise for money for perovskite P1-P2-P3 laser patterning



- compact design
- power 75W
- 1060 nm wavelength
- 110 mm X 110 mm marking scope
- high precision beam
- Fast marking up to 7000 mm/s
- free of maintenance
- very low operational cost



### PNEUMATIC HEAT PRESS

Essencial tool for fast encapsulation



- 38 cm X 38 cm plate or 40 cm X 50 cm plate
- up to 299 °C
- timer from 0 to 999 sec
- compact model
- very robust

### CERTIFIED REFERENCE CELL

Top quality device fundamental for reliable measurements



- c-Si 21 mm X 21 mm cell certified by Fraunhofer institute
- robust device
- PT100 integrated temperature sensor

### ALL IN ONE MEASUREMENT PLATFORM

From steady state to dynamic electro optical test



- Modular & upgradable
- JV measurement up to 2 SUN
- MPP tracking Electro photo Luminescence
- Thermal resolved analysis
- EQE-IQE
- CELIV
- EIS-IMVS-IMPS
- Mott Schottky
- LabView based customizable routines

### CERTIFIED SPECTROMETER

Top deal, high precision in a compact design



- certified by NREL
- only 13 cm X 9 cm x 3 cm
- low weight only 1 Kg
- very robust and precise
- free software
- low price

### STABILITY PLATFORM

best choice for multiple channels acquisition system



- Up to 64 source meters in parallel for advanced ageing tests
- custom holders and chambers available
- LabVIEW based interface
- JV advanced MPPT algorithms
- Hysteresis analysis