

# FCT-750: Inline Light I-V Testing for Solar Cells



Inline, light I-V and Suns-Voc measurements in a single flash at 3600 units per hour. Capability to accurately measure high-efficiency conventional or backside-contact solar cells.

## Product Overview

The FCT-750 has been designed to have the highest possible accuracy for measuring solar cells, namely high-efficiency cells. This is done using a patented voltage modulation to neutralize capacitive effects in the I-V measurement.

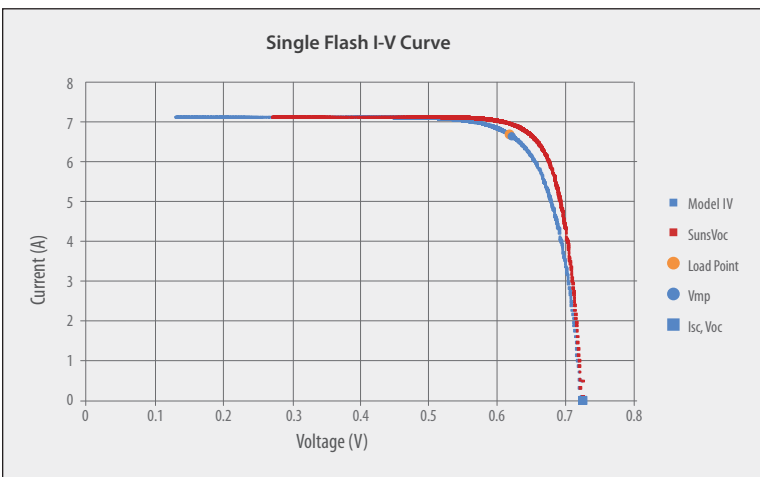
The FCT-750 provides standard cell outputs which are supplemented with a Suns-Voc analysis and a substrate doping determination.

All of these parameters are available in a single flash pulse.

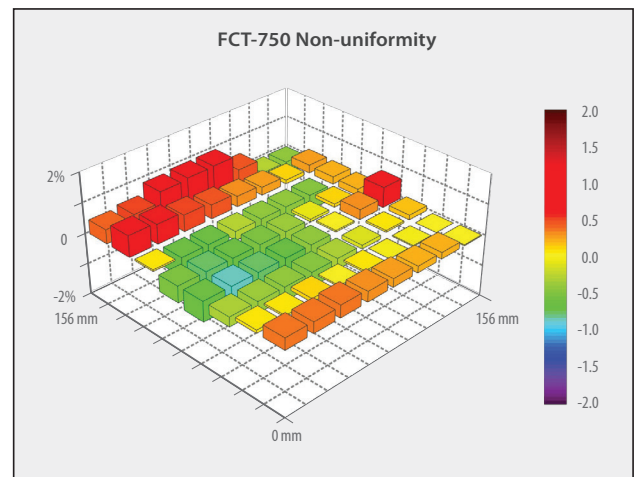
## System Capabilities

Single flash measurement to obtain:

- Standard cell results:  
Isc, Voc, Power, Vmp, Imp, FF, Efficiency, Rs, Rsh
- Advanced results:  
Suns-Voc, Bulk Lifetime, Lifetime at Max Power, Jo, Substrate Doping, Pseudo I-V parameters



The instrument interface displays both I-V and Suns-Voc data. This permits quick identification of shunt and series resistance effects.



The non-uniformity of the FCT-750 is Class A ( $\pm 2\%$ ) over 156 mm x 156 mm.

## Specifications

### Instrument Specifications

#### Available measurements

- Voc, Isc, power, Vmp, Imp, FF, Rs, Rsh
- Suns-Voc parameters
- Jo, bulk lifetime, lifetime at max power
- Substrate doping

#### Measurement mode

- Single flash full I-V

#### Current

- 15 A

#### Voltage

- 10V

#### Available intensity range

- 0.2–1.2 suns

#### Non-uniformity

- $\pm 2\%$  156 x 156 mm

#### Simulator class

- Class A non-uniformity over 156 x 156 mm
- Class A temporal stability
- Class A spectrum

#### Warranty

- One-year limited warranty on all parts and software
- Service agreement also available



### Facility Requirements

#### Ambient operating temperature

- 20°C–25°C

#### Power requirements

- Instrument: 80 W
- Computer with monitor: 200 W
- Light source: 60 W

#### Dimensions

- Computer: 22 x 26 x 18 cm (L x W x H)
- Tower: 48 x 40 x 144 cm (L x W x H)
- Flash power supply: 43 x 51 x 12 cm (L x W x H)
- Electronic load box: 49 x 49 x 14 cm (L x W x H)

#### Universal mains voltage

- 100–240 VAC 50/60 Hz

#### Special facilities requirements

- Vacuum: 20 in Hg
- Compressed air



High throughput flash power supply and electronic load box.

### FCT Components

- Electronic load and current, voltage interconnections
- Programmable flashlamp and supply
- Windows PC with installed, configured software and monitor
- Sinton Instruments data acquisition and analysis software package
- High-resolution, high-speed data acquisition with simultaneous I-V-illumination sampling
- Temperature-controlled chuck

### Purchasing Information

For a quote, please contact [quotes@sintoninstruments.com](mailto:quotes@sintoninstruments.com)

We are happy to accommodate custom requirements. Please inquire about a quote for your specific needs.

Quotes are valid for 60 days. For our full product line, visit our website at: [www.sintoninstruments.com](http://www.sintoninstruments.com)

