

Quality Control for Producing More Powerful Solar Cells

Never Stand Still

NewSouth Innovations

A new tool to measure the photoluminescence of Solar Cells, quickly and with more flexibility than ever before

The Technology

is available under licence for Free

Highly contaminated or defect-rich silicon such as Thin Film or at grain boundaries in multicrystalline silicon, has very short minority carrier lifetimes of often less than 1 μ s.

Up until now accurate measurement of the silicon quality with commonly-used techniques has been a challenge as they are limited to longer lifetimes and larger probing areas. Often results are beyond the speed and sensitivity of the typically-used detectors and electronics making quality control difficult.

UNSW Australia researchers have developed a new multi-function Photoluminescence tool that provides the flexibility required to accurately test difficult samples and regions of particular interest.

Key Benefits

- Time resolved measurement, minority carrier lifetime of 1 ns to beyond 1 ms.
- High light sensitivity and a wide dynamic range.
- Useful over a range of wavelengths with high resolution.
- Focus on small spots on the test sample of less than 40 μ m in diameter.
- Temperature control of the sample during testing.

Applications

- Quality control and Lifetime Testing of multicrystalline or thin film cells.
- Detailed testing for regions of interest within cells (e.g. grain boundaries).
- Quality control of other semiconductor devices.



Advanced quality control for multicrystalline Solar PV cells.

The Opportunity

This technology is available for free as an Easy Access Licence to companies and individuals.



For more information contact:

Daniel Gronowski

Business Development Manager

NewSouth Innovations

Ref 14_2959

T: +61 2 9385 7772 | M: +61 415 044 589

E: d.gronowski@nsinnovations.com.au