

# Company finds technologies for new markets



## The Problem/Need

Leighton Electronics Inc. (LEI) is a global supplier of non-destructive metrology equipment used in the compound semi-conductor industry. LEI wanted to pursue new growth opportunities in the solar and display sectors, but the unique structures of wafers and panels in these applications required new measurement technologies. LEI needed alternate or emerging methods for electrical metrology on conductive substrates.



## Project Outcomes

- Reviewed federal lab and university research, patent databases, and cross-industry literature to build a landscape of fundamental metrology approaches relevant to LEI.
- Engaged industry and lab experts to evaluate optical, low energy-contact, magnetic, microwave, and unique electrical probe techniques.
- Identified three potential commercial options and one federal lab partner.

## Key Requirements

- Non-destructive resistance measurements for highly doped and conducting substrates.
- NIST traceable electrical measurement ranges and repeatable high precision.
- Sub-second measurement speed.
- Low cost and a physical size comparable to current metrology products.
- Only prototype or commercially-proven probe and metrology solutions.



## Project Impact

- As a result of this project, LEI:
- Explored commercial and development opportunities with commercial solution providers.
  - Began developing a metrology capability for the targeted applications.
  - Identified a target market opportunity estimated at over \$5 million, which would represent a significant growth opportunity for LEI.

*“This is great. We would have never uncovered these technologies without MRC’s good help.”*

– Austin Blew, President, Leighton Electronics Inc.