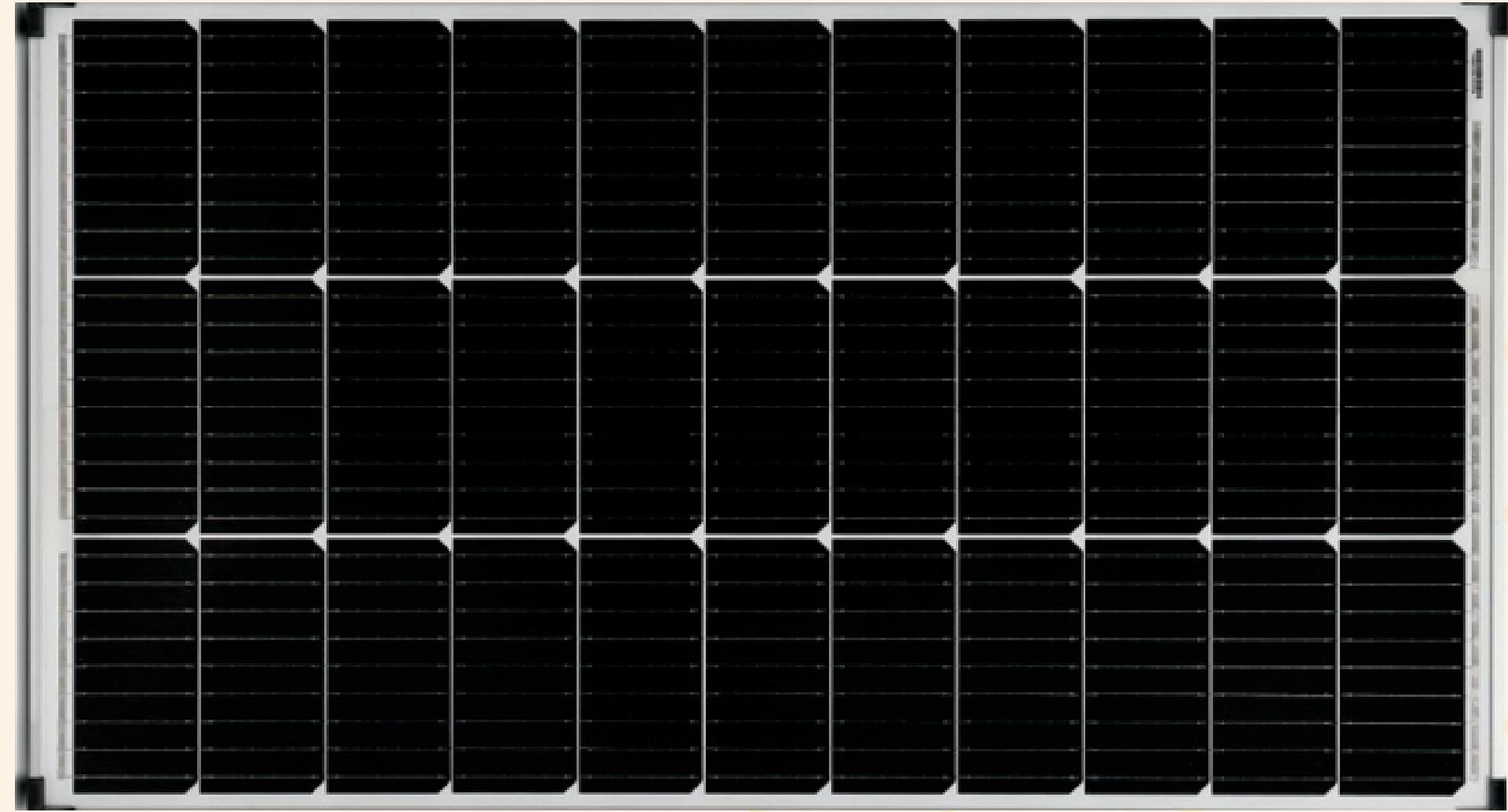




Australian  
National  
University



# Portable Electroluminescence Device



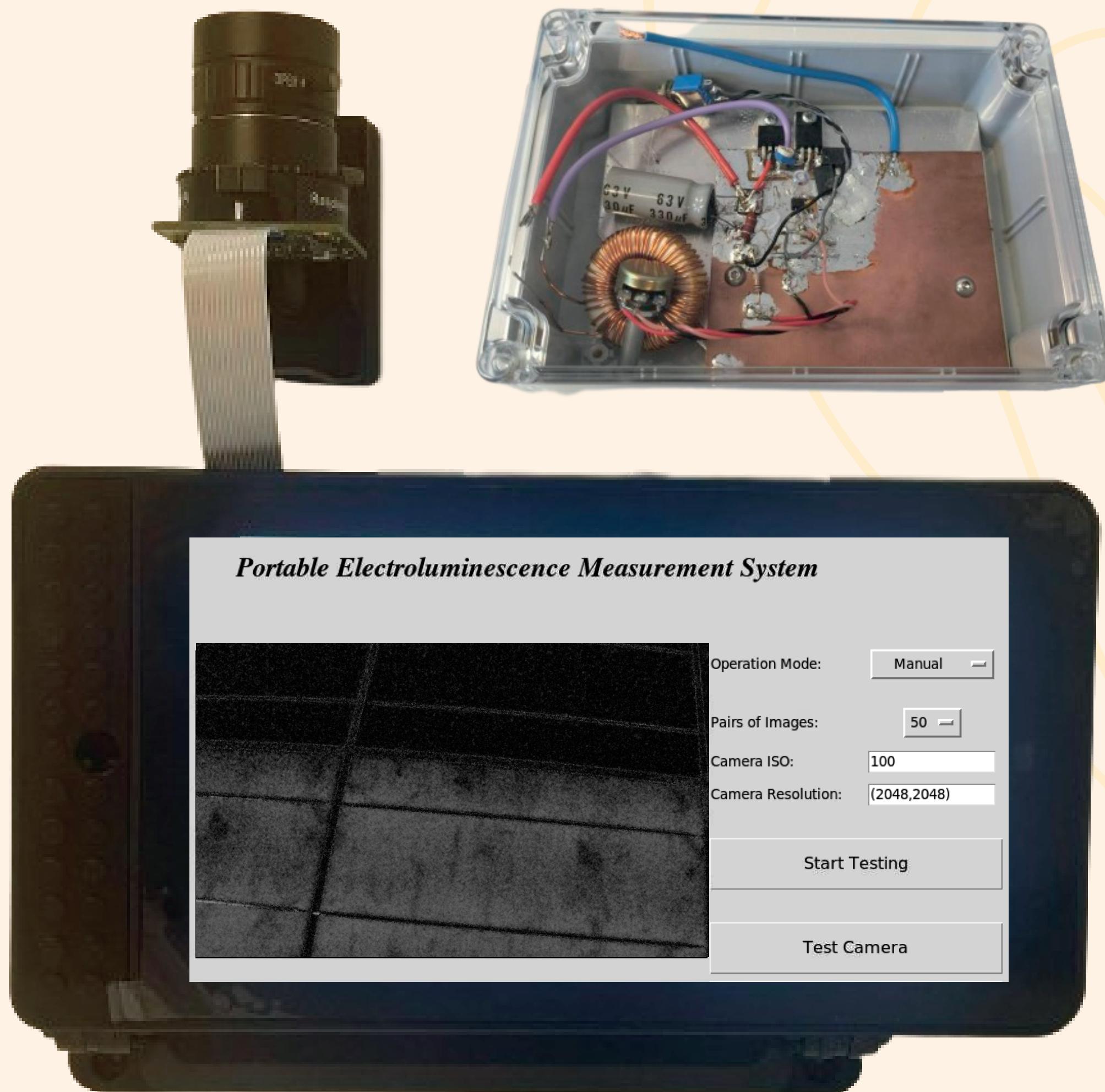
Fast error identification for solar panels

Connect

Test

Analyse

Repair



## Motivation

- Electroluminescence identifies inactive or defective cells
- Current EL requires dismantling solar panels from mount
- Current method is expensive and time consuming
- Residential, rural, and smaller communities unable to reliably test solar panels.

## Achievements

- Design and assembly of fully functional prototype
- Control unit manages camera and current regulator via radio frequency link
- User-friendly interface
- Obtained EL image that shows errors in solar panel
- Demonstration available!

## Opportunities

- Upgrade current regulator to pass current above 10A
- Implementing camera exposure time variance and image post-processing into seamless process
- Upgrading user interface from Tkinter to PyQt
- Upgrading current regulator to a printed circuit board



Project Page



Prototype 1  
Demonstration