

SCS800

SCS800 Solar Cell Defect Mapping System

SCS800 uses galvanometer-scanned laser excitation to map photocurrent and photovoltage across solar cells and photoelectric materials. Field options up to 300 × 300 mm support spatial uniformity studies and defect localisation.

Best for: Locating non-uniform response, contact problems and defects across large photovoltaic samples.

**300 × 300 mm**

Largest scan field

< 100 µm

Specified resolution

532 nm

Standard laser

1 nA–1 A

Current range

Overview

SCS800 associates laser position with the electrical response of the sample to produce current and voltage maps. These maps help identify local conversion losses and guide process optimisation.

Choose the scan field and excitation wavelength for the material. An optional vacuum sample stage supports water cooling and multiple probe contacts for different solar-cell busbar layouts.

Features

- Galvanometer scanning with false-colour response maps
- Additional 405, 532, 635 and 808 nm laser options
- Optional vacuum holding and temperature-controlled sample stage

Applications

- Silicon and perovskite cell defect localisation
- Large-area photoelectric response uniformity
- Photovoltaic research and quality screening

Specifications and configuration

Scanning and acquisition	
Scan-field options	100 × 100, 200 × 200 or 300 × 300 mm
Spatial resolution	< 100 µm in the instrument parameter table
Standard laser	532 nm; power stability ±1% over 4 hours
Current range	1 nA–1 A
Dark noise	100 pA
Current resolution	20 fA
Acquisition accuracy	0.03%

Optional sample stage	
Stage	300 × 300 mm with vacuum holding
Water cooling	5–35 °C; temperature-control accuracy ±0.1 °C
Contacts	Six probes; configurations for 3, 4, 5, 6, 9, 12 or 16 busbars

Configuration and quotation

Share the sample size, wavelength range and required measurements to select the source, optics and acquisition modules.

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www.precisometer.com/spectroscopy/photoelectric-testing/scs800