



# THERMAL ANALYSIS

9661 CANYON LANDING AVE. 04/14/2025 1200hrs.

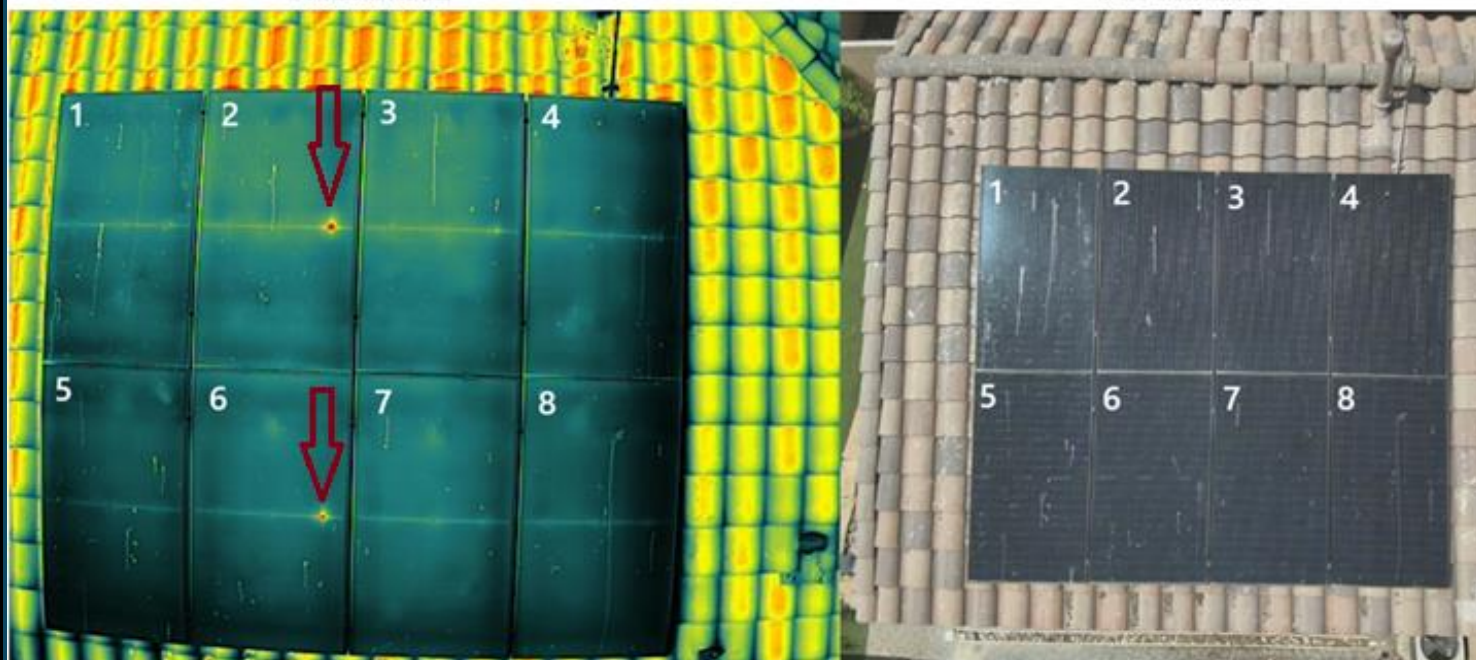
East roof-8 panel array

West roof- 9 panel array

## EAST ROOF

THERMAL

NORMAL



Aerial thermographic analysis of the east roof panels shows 8 vertically oriented (likely Half Cut style) panels with no heat signatures indicating malfunctioning cells. Panels 2 and 6 exhibit a thermal anomaly along the center axis consistent with early signs of interconnect stress.

Possible causes of Midline Hot Spots in Half-Cut Panels:

### 1. Stressed Central Interconnect or Junction

- The central interconnect is where the current from the top and bottom halves of panel combine.
- A bad solder, microcrack, or loose tabbing ribbon here will increase resistance.
- That resistance = localized heat, even if the panel seems to be producing normally.

This is the most common cause of centerline hotspots in half-cut panels.

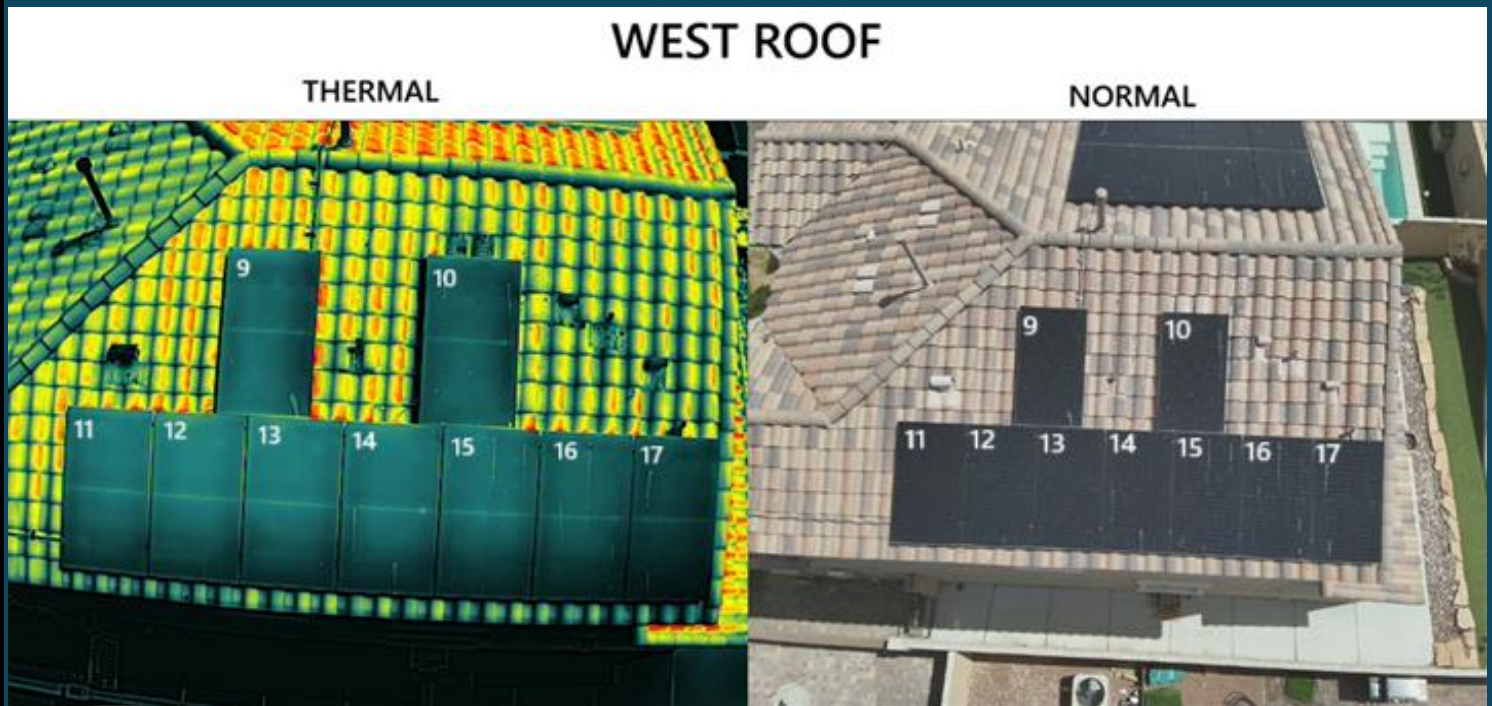
## 2. Lamination or EVA Voiding

- Heat right along the midline could also be from voids or bubbles in the encapsulant caused during manufacturing.
- This can trap heat and cause visible hot spots.

Aerial thermographic analysis of West roof shows an array of 9 vertically arranged (likely Half Cut style) panels. Minor dust and bird droppings are present as common. No problematic thermal signatures are visible.

## Recommendations

Re-image panels 2 and 6 in six months to see if increased heat in midline is effecting surrounding cells or not.



### Terms

- Half cut panel- A type of solar panel that is essentially two solar panels combined into one. The top and bottom halves can act independently of each other depending on availability of light.
- Interconnect- The connection between the upper and lower halves where their energy combines to be sent out for use.
- EVA/Lamination- Your panels are made up of layers, EVA refers to the material these layers are made of. This material seals the working elements of the panel from the environment.



Thank you for trusting Southwest Solar Inspection!

Disclaimer

This aerial thermography report is intended solely as a diagnostic aid and is not a guarantee of photovoltaic system performance or condition. Thermal imaging can help identify areas of concern by highlighting temperature anomalies; however, it does not provide a definitive diagnosis of panel integrity or electrical performance. All findings should be interpreted as guidance for monitoring potential issues over time. Southwest Solar Inspection assumes no liability for any undetected or future system failures.