KNOW THE LIMITS: PITFALLS OF USING A SPOT RADIOMETER

Spot radiometers are popular for quick temperature checks, but they have limitations that can lead to misleading results if not properly understood.

First, the measured temperature is actually an **average over the spot size**, not a precise reading of a pinpoint area. This means if you're targeting a small, hot component but the spot size also includes cooler surroundings, the result will be skewed. The accuracy of the reading directly depends on how small and focused that spot size is relative to the target.

Second, handheld spot radiometers are **not diagnostic tools**. Unlike infrared cameras, they cannot provide a full thermographic image, making it impossible to visualize heat patterns or pinpoint hotspots across a surface.

- While convenient for trending or spot checks, spot radiometers are best used as a basic screening tool—not for detailed diagnostics. For serious thermal inspections, infrared imaging is the better choice. Know your tools and use them accordingly.