

Predictive Skin Analysis System

Detect. Predict. Prevent — before you see it.



The next 48 hours of your skin. Visible right now.

A synchronized thermal-optical imaging system with adaptive radiometric calibration detects skin changes associated with inflammation **24–48 hours before visible symptoms appear** — enabling preventive intervention for **acne, redness, and hyperpigmentation**.

A cosmetic analysis tool. Not intended to diagnose, treat, cure, or prevent any disease or medical condition.

THE BREAKTHROUGH

How a \$150 camera outperforms \$10,000 equipment

Consumer thermal cameras drift — each frame can shift $\pm 2^{\circ}\text{C}$, far too noisy to detect the 0.3°C signal that precedes a breakout. Our patented **SD-18 calibration device** introduces precision thermal and optical reference standards into every scan, anchoring each frame to absolute skin temperature and eliminating sensor drift.

A \$150 uncooled camera performs at the level of a \$10,000 cooled medical camera.		
PARAMETER	\$150 UNCOOLED	WITH SD-18 CALIBRATION
Sensor	Uncooled VOx	Room-temp — no cryo cooling
Resolution	256×192 px	Multi-frame fusion — localization held
Pixel pitch	12 μm	Smaller → more compact device
NETD sensitivity	$< 50 \text{ sc-camel-m-k} = 0.05^{\circ}\text{C}$	Exceeds the 0.3°C skin threshold
Frame-to-frame drift	Up to $\pm 2^{\circ}\text{C}$	Eliminated — every scan comparable

THE SENSING STACK

Five signals. One system. Nothing like it.

Most skin-AI tools analyze a photo. This system reads beneath the surface — fusing five simultaneous data streams.

- 01 Thermal infrared (LWIR 8–14 μm)** — heat elevation 0.3°C above surrounding tissue, before any visible sign.
- 02 Calibrated RGB imaging** — erythema metrics corrected for ambient lighting and skin tone.
- 03 Multi-spectral illumination** — Blue / Green / Red / NIR / UV maps oxy-, deoxyhemoglobin and melanin independently.
- 04 UV porphyrin fluorescence** — detects follicular activity as an early acne trigger.
- 05 Longitudinal AI fusion** — tracks the thermal → erythema → pigmentation cascade across daily sessions to build a predictive model for each individual's skin.

This is not diagnosis. This is a 24–48 hour head start.

PLATFORM REACH

What this technology becomes

CONSUMER & AT-HOME

Predictive Skin Camera · Smart Mirror Module ·
Smartphone Thermal Add-On

RETAIL & BRAND ACTIVATION

In-Store Skin Concierge · Product Compatibility
Screener · White-Label OEM Module

PROFESSIONAL

Derm & Med-Spa Pro Tool · Remote Consultation
Support · Cosmetic Trial Imaging Kit

DIGITAL, AI & PLATFORM

Skin-Analysis SaaS / API — adds a predictive thermal
layer to existing visible-spectrum platforms

WHY IT STANDS APART

- First-of-kind prediction** — fuses LWIR + multispectral + adaptive calibration to detect sub-clinical inflammation before it's visible.
- Hardware-agnostic** — works with any uncooled microbolometer; the IP is in calibration and software.
- Patented cascade detection** — thermal → erythema → pigmentation tracking, unavailable in any current device.
- Built-in recurring revenue** — daily scans drive auto-replenishment; the SD-18 artifact is consumable by design.

Open for Licensing

Request the Full Technology Brief — NDA provided. Ideal partners that already own consumer trust, distribution, and manufacturing.



Dr. Boris Liberman
Inventor

