

The UV-MC consists of an embedded
'Nano Camera'
A UV Light source
A Multi Functional Sensor
A Data Storage system
A Battery
A small attached LED monitor
Bluetooth accessible
An I/O connector
delivered via a sterile adhesive pad

A camera with a variable (UV and Daylight) light source is placed inside the bandage, to monitor the scar and the healing and to provide UV light to kill bacteria....

This proposal shows, the cost would be low and it would be monitored directly or via Bluetooth to a phone app as well as Medical Diagnostics.

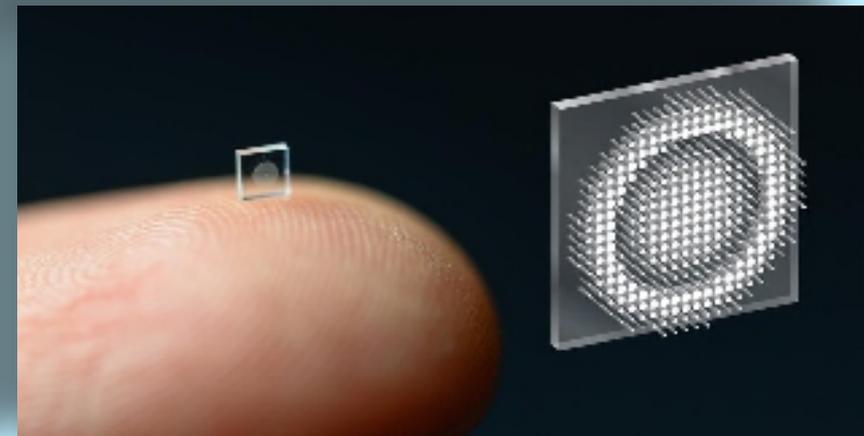
Lots more ideas for it...

- wounds at risk of infection or already infected;
- second degree burns;
- diabetic foot ulcers;
- surgical and traumatic wounds;
- skin grafts.



Sensors can indicate :

- Skin Temperature
- Humidity
- Infection onset
- Pressure variations
- Ambient Light
- UV Light
- Blood Pressure
- O2 - Oximeter
- Custom requirements



The UV-MC is placed over the wound, and the testing commences via an in-house monitor.

Basis points are established along with parameters indicating severity of change from each active sensor.

The wound is dressed and can be monitored locally via :

- ★ The externally attached screen,
- ★ via Bluetooth connection to a surgical monitor
- ★ Having the data downloaded from the UV-MC via an I/O port.

Critical limits can be advised as required: e.g.

- ✦ Visually seen as a flashing LED on the UV-MC screen on the wound
- ✦ An audible beep
- ✦ An SMS Alert

Surgical records can be maintained digitally and added to Patient Reports.

An image can be :

- Viewed on a monitor, together with parameters,
- Saved to a local SD Card
- Viewed via Bluetooth to an App on Smartphone or Tablet
- Printed to any available printer

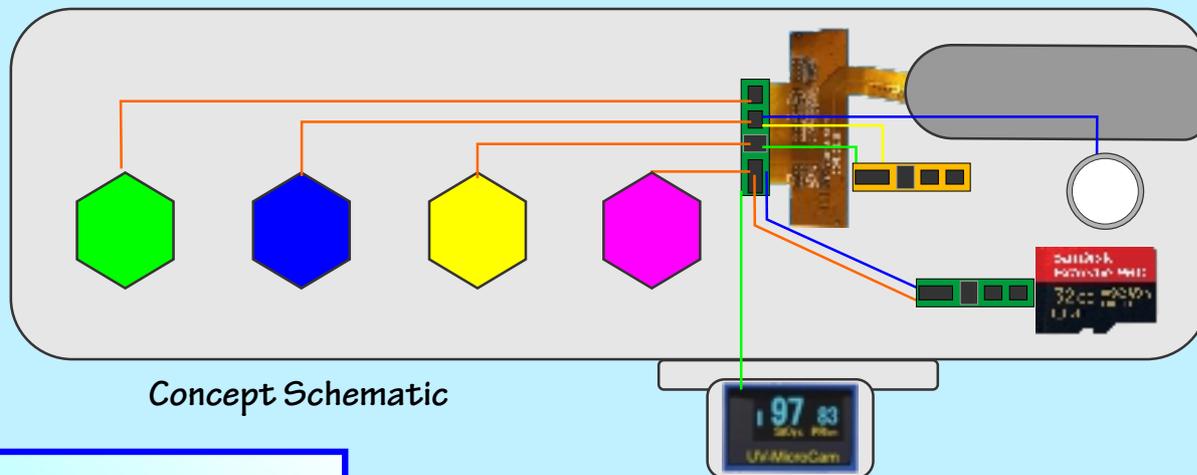


Actual Size



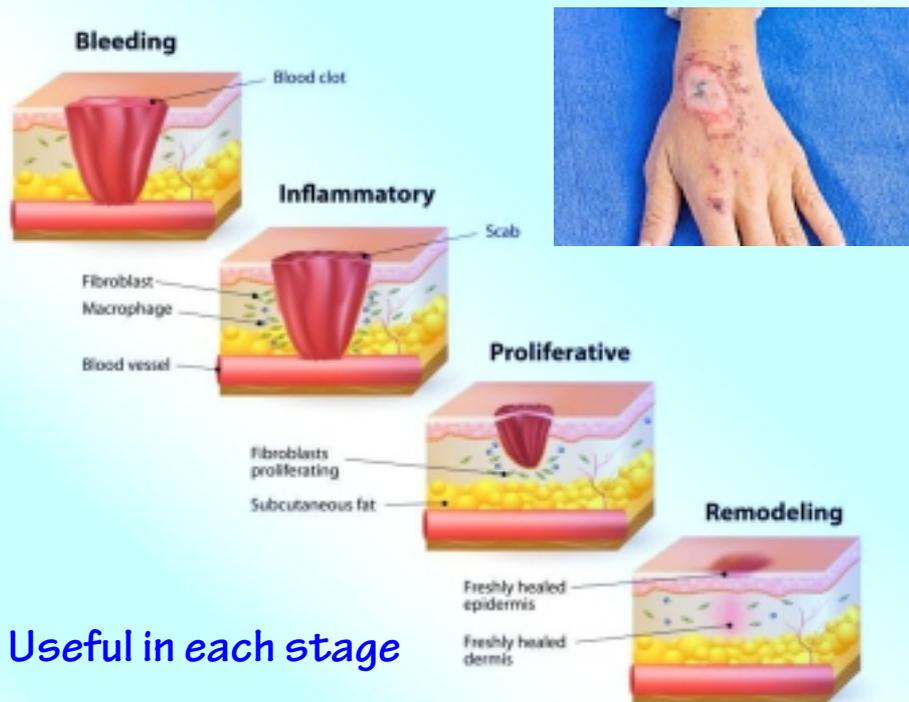
Internal

External



Concept Schematic

WOUND HEALING



Useful in each stage



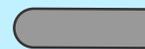
LED DISPLAY



LOCAL STORAGE



BATTERY



I/O PORT



UV LED



WHITE LED



CAMERA



MULTI SENSOR

What if:

A camera with a variable (UV and Daylight) light source was placed inside the bandage, to monitor the scar and the healing and to provide UV light to kill bacteria.... The technology exists, the cost would be low and it could be monitored directly or via Bluetooth to a phone app.

Lots more ideas for it...

https://phys.org/news/2021-11-camera-size-salt-grain.html?fbclid=IwAR341tBeipae-h7whZxIKcQWGOObVYPcv_wQX_jgsQ1FoNt_NYgU1SqvXcQ

Micro-sized cameras have great potential to spot problems in the human body and enable sensing for super-small robots, but past approaches captured fuzzy, distorted images with limited fields of view.

https://techxplore.com/news/2023-10-future-ai-hardware-scientists-unveil.html?fbclid=IwAR0qaxO3Ls0TYnk7rn7qZTcseauBxYdo32ji6k_54TsZ-UcZCteKpbIns54

Computer vision is an ever-evolving field of artificial intelligence focused on enabling machines to interpret and understand visual information from the world, similar to how humans perceive and process images and videos.

It involves tasks such as image recognition, object detection, and scene understanding. This is done by converting analog signals from the environment into digital signals for processing by neural networks, enabling machines to make sense of visual information. However, this analog-to-digital conversion consumes significant time and energy, limiting the speed and efficiency of practical neural network implementations.



Omnivision built the world's smallest image sensor at 0.575 mm, then packaged it into the OVM6948 camera.

It is small enough to ride on the tip of a 1 mm catheter.

Backside illumination keeps the image clear without overheating tissue. The analog signal runs 4 m with little noise, so it works straight out of the box.

That turns guesswork into a live video feed. Procedures become less invasive. Patients recover faster.

What makes it stand out is not only shrinking it but producing it at scale.

Wafer-level packaging means these single-use scopes can move beyond demos and into hospitals everywhere.

And it may not stop at hospitals. Dentistry, veterinary medicine, and industrial inspection can all benefit from cameras this small.

A speck of silicon that changes how we look inside what was once hidden.

What's the most surprising use case you can imagine for a salt-sized camera?

**INDUSTRIES
BIO-MED**

UV-MICROCAM

INNOVATION

