

Hyperspectral camera

Combining spacial and spectral information of an object to see more then what meets the eye.

PROBLEM

While hyperspectral imaging technology has been in use for some time, its current applications are largely constrained to specific domains due to the size, bulk, and cost of existing systems. However, advancements in have paved the way for a transformative shift.

The integration of hyperspectral imaging principles onto a compact chip, while having the filter as a separate component, opens a realm of new possibilities and feasible applications. This breakthrough technology promises to revolutionize various industries, offering precise and detailed spectral information in a compact, cost-effective form factor.

Potential Markets

Applications

- Industry: sorting plastics, additive materials and food.
- Textile industry: Sorting plastics or quantify textile compositions.
- Agriculture: Weed sprayers, fertilizer sprayers

MISSION & VISION

Enable affordable, robust and scalable hyperspectral camera's.

Initial Validation

The hyperspectral camera is covered by 19 patent families to secure the unicity. These patents are on the component level. The TRL level of the manufacturability of the components (and the patents which lies beneath it) vary between 2 and 9. Nonetheless, the most patents have a TRL level of 4 or higher.

Regarding the concept of hyperspectral camera, there are 3 patents in place. Two of those patented technologies have a TRL of 5 and one of them has already a TRL of 9.

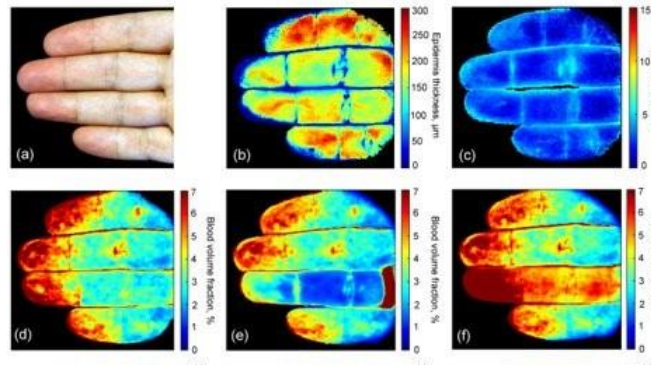
SOLUTION

This technology has two solutions it can offer. The first one is a passive staring hyperspectral camera for further application development. The second one is an active hyperspectral camera. This can be achieved, once one of the two components is combined with a supercontinuum laser or a LED light source.

TECHNOLOGY

Micro Electro-Mechanical System (MEMS) or Piezo based Fabry-Perot Interferometer which can be used as a tunable optical filter.

The venture will need to identify, based on the market opportunity, which platform they need and how to build on top of the VTT innovations.



Call to action

We are looking for enthusiastic and entrepreneurial people to assess which application has the most potential. We look for businesspeople, medical experts, industry quality control experts, textile industry experts and integrated photonics expertise. Interested? Reach out to info@hightechxl.com